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AUSTRALIA'S HOME

THE FORGOTTEN HOUSE

Nineteenth-century vernacular in New South Wales

AUSTRALIA'S HOME

Its Origins, Builders and Occupiers

ROBIN BOYD

A.R.A.I.A.

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Preface

This book, a study of the vernacular in domestic building in Australia, is concerned for the most part with the small houses which have taken up some two-thirds of the building capacity of the nation.

From early colonial days most of these houses were designed by builders on commission or on speculation for rental or sale; thus in direct or indirect response to the tastes of Australian women and their husbands. They were built without knowledge of architectural philosophies but with keen attention to superficial architectural fashions, which the builders translated with the limited language of hereditary carpentry and bricklaying practices.

Where I have referred to architects of note, mansions of wealth and buildings of conscious artistic expression, I have tried to concern myself more with their influences on the subsequent vernacular than with their private histories. Similarly I have not attempted to do justice to the magnificent early colonial homesteads of New South Wales and Tasmania, which have already been the subject of various books. These deserve more detailed attention before they are all destroyed, and yet are irrelevant to the present study.

Despite the unco-ordinated wealth and time expended on it, the small house has been considered by authority as one of the lowest forms of building creation in Australia. Successful architects and builders seldom deign to touch it. Big business has all but spurned it. Politicians consider it only in times of acute shortage. Yet the small house, probably more than anything else that man has done, has made the face of Australia and to an extent the faces of Australians.

Australia is the small house. Ownership of one in a fenced allotment is as inevitable and unquestionable a goal of the average Australian as marriage. Australia has more per head of population than other nations and has maintained a higher standard of living in a greater number of them. Collectively, they are an achievement. Individually they are prey to thoughtless habits, snobberies and fickle sentiment.

This is the story of a material triumph and an aesthetic calamity.

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PART I

TEN MILLION PRIVATE ROOMS

1

Survey and Sketch Plans

TOWARDS the end of the eighteenth century, Englishmen began building houses on the east coast of this warm land of curious life and unknown vastness. They had selected, more by luck than exploration, the banks of a magnificent harbour, a place which posterity generally recognized as one of the best city sites in the world.

It was about four centuries after the great community hall of the mediaeval manor house began to break into a collection of private rooms, and one and a half centuries before each collection of private rooms began to melt back into a single living space. It was two centuries after Queen Elizabeth had proclaimed the principle of a private house for every family. It was midway in history between Inigo Jones and Le Corbusier.

These Englishmen, marines and convicts, and their few women, had left the England of the Adam brothers; of tall, pastel-tinted rooms, gilded ornament and gleaming silverware; of Wedgwood and the water-closet – a state where domestic building for the privileged had reached physical and artistic maturity. Many of them, not having been privileged, knew nothing of these things. But all of them had the acquired English taste for privacy, and it was this taste which remained a prime motive through the subsequent generations of home-building.

Each family asked, when the day's work was done, for isolation from the next family. Each member asked for the possibility of privacy from the remainder of the family. The nation was built on the principle that for every family there should be a separate house and for every person there should be a separate room.

The pattern of this culture, through the years and across the great distances, was fairly consistent. Each town was in essence a great sea of small houses around a commercial and industrial island. Each house was a group of compartments of varying size, each compartment serving a slightly different purpose. People cooked in one, ate in another, sat reading in another, tucked their children to bed in another, slept in another. There came a time when they performed the principal movements of the preparation for the day — shave, tooth-clean, toilet, shower and dress — in four different cubicles. They liked to have separate compartments for eating breakfast and dinner, and if possible a third for lunch. They liked one room for sitting by themselves and one for sitting with visitors.

In a land of rolling plains and wide blue skies, a race of cheerful agoraphobes grew up in little weather-sealed boxes. By the middle of the twentieth century, with the population just over eight million, Australia had nearly two million private houses with an average of five rooms each — more rooms than people. And of every ten people, five lived in a capital city, one other lived in a city of more than 12,500 inhabitants, and another lived in a big town; only about three lived in a non-urban area. Living in an urban area almost invariably meant living in a suburban area. In 1947 (census year) 93 5 per cent of Sydney's 1,484,434 inhabitants lived outside the municipality of Sydney, and 92 per cent of Melbourne's 1,226,923 lived outside the city in the vast ring of suburbs.

The suburb was the major element of Australian society. Factory, shop, office, theatre and restaurant were not radically different the world over. The interior of an Australian house could be given any atmosphere; it might be no different from the interior of an apartment in Rome or a flat in Regent's Park, London. But in the suburb was experienced that essentially Australian part of town life which lay between work and home.

The Australian suburb was a wide winding avenue of heavy oaks lined by tall fences and impenetrable hedges, a glimpse of high gables or plaster parapets through a curtain of leaves, a monumental gateway, a sweep of gravel drive, bay windows, lawns, flowering shrubs. Or it may have been a gully between two broken ranges of red walls and roofs, a straight street one chain in width, with narrow grass strips dividing sidewalks from the roadway, cropped trees and telegraph poles set in line in the grass, low continuous fences made of fifty-feet sections of pickets or bricks or woven wire, squares of lawn with beds of annuals and low shrubs and a sprinkling of decorative trees, high grey paling fences slicing up the gardens and the red façades, porches, bricks, cream weatherboards, curtained windows. Or it may have been a treeless traffic way with the fences divided into much smaller sections, continuous rows of buildings on each hand pressing greedily forward over the garden, the brown brick faces only a few feet behind the fences, like a football crowd craning to watch the defeat of the Australian domestic idea.

The suburb was a street in the cold dawn full of grey figures converging on a yellow cement railway station from which they would vanish to factory bench and serving counter. Or it was a car rolling with a long, luxurious bounce out of a driveway and on to the short road to town. Or it was a group waiting on a corner, newspapers dispensed by an honesty box, neat tailoring, leather cases, lunch-bags, and magazines to be read in the tram which would weave them through miles of similar streets into the fabric of the town.

The suburb was children playing cricket against a lamp-post in a hot, narrow street or in an asphalt schoolyard or on steel equipment in a tan playground or in a broad park with secret stretches of shrubbery and with yabbies in the lake. It was women carrying bulging baskets in a busy, chatty street of small shops. It was a baby and toys in a wooden pen on the front lawn; a bored horse in a slow baker's cart; dogs strutting the grass strip in an important procession. It was the slap of tennis rackets after Saturday lunch; a muddy football match on the municipal ground watched by a thin ring of friends; the squeals from a crowded swimming pool; a brief fist fight bursting through the doors of a packed bar. It was the purr of lawn-mowers; the car being washed in the street with a hose threaded through the fence; neighbours discussing the merits of their favourite manures while applying them to their front flower beds; a short burst of glassy laughter from the house where they entertained on

Sunday mornings. It was the old tourer filled with two families of burnt backs and sand returning from the beach; or the new sedan with an elderly couple returning from a country spin.

The suburb was the bare neon tubes of the milk-bar; orange sodas in the interval between two features at the cinema; twisted streamers in the Oddfellows' Hall; the silent line of cars outside one lighted house in a darkened street.

It was "Sunday Sport Not Allowed", "Keep Off the Grass", "Dogs Found Will Be Destroyed", "Commit No Nuisance", and countless other kindred elements of a half-world between city and country in which most Australians lived.

Every time young Arthur Phillip saw his aunts in Bath he must have been conscious of the spectacular and unusual new buildings which had appeared since his last visit. His life in England before leaving to found Australia coincided with the great social period of Bath, and the great architectural works there by the elder and the younger John Wood. The Circus was built by the latter in 1764 and Royal Crescent in 1769. In London, at the time Phillip left with the First Fleet (1787), there were already some twenty residential squares — though the peak of square-building was not reached till half a century later.

An important principle behind all this building was the sharing of outdoor living-space, the provision of one sizeable mutually-owned park in place of a number of small private garden plots connected with the houses. Externally the houses had no individuality. They lined the ring road around square or circus in an unbroken row — straight or curved — in a single architectural conception. Each tenant held a key to the gate of the central garden. Inside each house the English demand for privacy was granted. Externally, civic architectural unity was achieved.

Yet in the limitless new land, Governor Arthur Phillip apparently did not see the desirability of directing his embryonic city on any such co-operative principle. In a subsequently famous despatch to Lord Sydney he proposed that "the land will be granted with a clause that will ever prevent more than one house being built on the allotment, which will be 60-feet in front and 150-feet in depth". As it happened, this (as also his other planning suggestions for Sydney) was ignored. The lots grew cramped and the streets haphazard; Sydney's plan was out of hand in a few years, never to recover. But Phillip's proposal was prophetic. The 60-ft. by 150-ft. lot, often contracted by ten feet in width and varied a few feet one way or the other in depth, was to become the norm in subdivisions in the twentieth century. By then the population was spread fifteen people to the acre over square miles of suburban development. And all that remained of co-operative planning, of civic unity, was the narrow grass "nature strip" running between the footpath and the road. The London square was replaced by the ribbon, the unified row of houses by architectural anarchy.

Soon after the first men landed, they were making bricks and stripping the forest, knocking together barracks for the military, a good brick house for the Governor, a rougher one of hewn stone for the Lieutenant-Governor, and primitive little huts for the rest. For one generation there was extreme inequality of comfort. The few privileged people tried hard to transfer some of the elegance of England to their clearings in the bush, importing many thousands of pounds worth of joinery and furniture for one wide, cool house. A much greater number lived in ramshackle single- or double-roomed huts. The windows were unglazed, with sawn hardwood shutters. The floor was mud and the furniture roughly improvised. Hundreds of convicts lived in cramped community huts. Later, when more women arrived,[1] floors went in, chintz covered the windows and wooden stretchers, and the plain deal tables were scrubbed white. Such was the beginning of Australian suburban living.

To these early settlers, torn from the side of the world where trees were accountable and lost their leaves in winter, doubtless there seemed to be but one Australian tree — the tough gum. Others later counted over seven hundred varieties of eucalypt. In housing, the situation was the contrary. In the twentieth century there appeared to be at least seven hundred varieties of small houses, but a brief investigation of each variety indicated that there were in fact no more than four or five types, within each of which were superficial variations like the individual contortions of a tree's branches.

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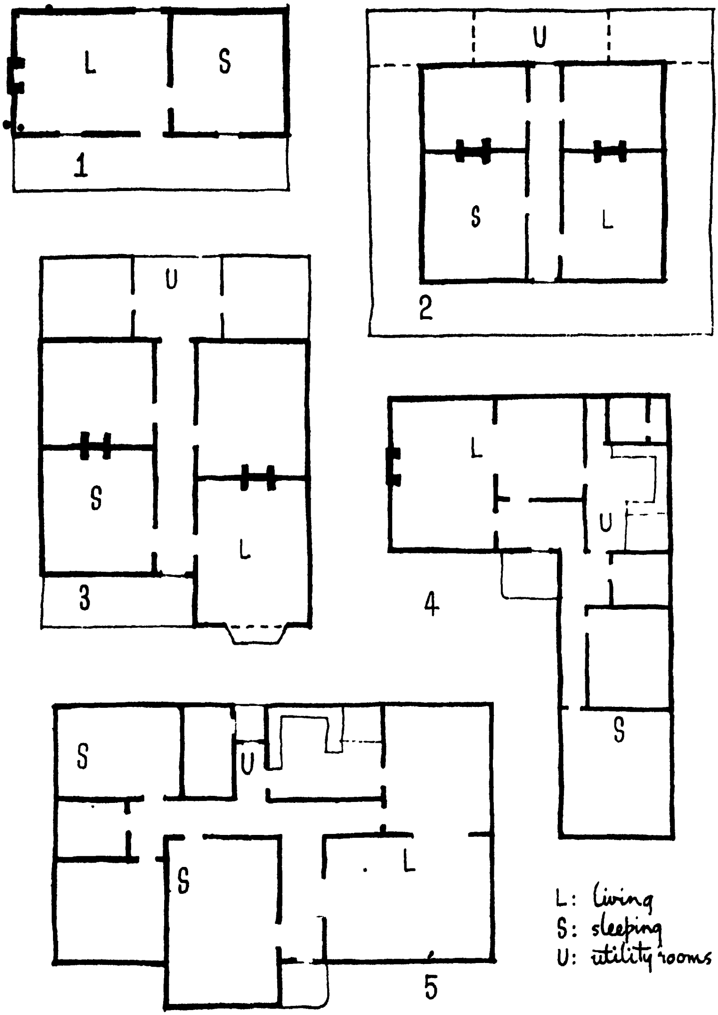
[1] Authorities differ on the numbers who landed with Phillip, but of some 1,030 arrivals, there were probably no more than 29 "privileged" women (marines' wives, etc.) and 192 convict women (*Australian Encyclopaedia*); a proportion of males to females of 5 to 1. This proportion levelled slowly to 2 to 1 in 1840. The proportion was again upset by gold-rush immigration, but was almost balanced by 1880.

The principal types were:

(1) *The Primitive Cottage.* This consisted of only two rooms. One was slightly longer than the other, so that a central front door gave directly into it. This was the living-room. The other, entered by an internal door, was the bedroom. One small window to each room was placed at even distance on either side of the door. A fire-place and chimney stood at the far end of the living-room; the side walls were blind. In South Australia, New South Wales and northern Victoria, the cottage was provided with a verandah under a lower-pitched roof across the front. In Western Australia and northern Queensland, the verandah ran round the house. In the far south it was sometimes omitted. This plan was frequently extended, either at the time of building or later, by two rooms under a lower-pitched skillion at the back, matching the front verandah in a balanced profile. One of the additional rooms formed the kitchen, the other the children's bedroom.

(2) *The Bungalow.* Based on the English cottage plan of the eighteenth century, this had a central passage with two or three rooms on each side. Australia discarded England's upper floor, spread the house on the ground and added a verandah on every side. This plan survived in country districts for a full century from 1840. With its high crowned roof and drooping verandah it became as familiar and typically country Australian as a midday dinner of roast mutton and steamed pudding.

(3) *The Asymmetrical Front.* This was the Victorian era's contribution to the bungalow plan. One front room, usually the left-hand one facing the street, was thrust for-



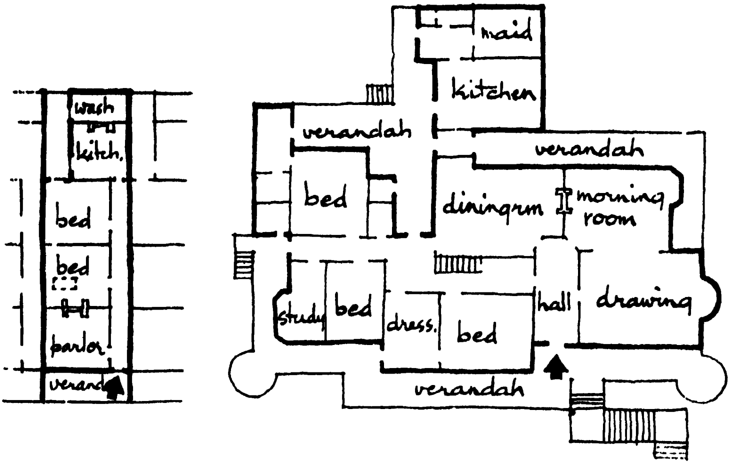
Five Principal Plan Types

(1) Primitive Cottage; (2) Bungalow; (3) Asymmetrical Front; (4) L.-shape; (5) Triple-front. An infinite number of minor variations disguised the fact that nearly every small Australian house was based on one of these five plans—more than one million of them being based on No. 3 alone.

ward in line with the front verandah and the main roof was broken to extend over this projection. The verandah was omitted from the sides. The front verandah was thus reduced to little more than a porch. It was too small and too public to be used as living-space. Its one remaining function was to shelter the front door. Yet this convention of a verandah was to last at least until the 1920's. Then the shelter was further reduced and became merely a porch in front of the door. Both the verandah, and later the porch, having the lightest of functional anchors, gave themselves freely to stylism. They were the major features of façades, setting the stylistic note, as fire-place surrounds invariably set the notes for interiors. In the Victorian era, the verandah appeared again at the back, changed in character; it was glazed and partitioned into a central vestibule, with maid's room and kitchen on either side. This plan persisted in the suburbs of the southern capitals for a full century from 1850, subject to numerous stylistic variations. From World War I onward it began to supplant the bungalow plan in the country, and even in the far north.

(4) *The L-shape.* An inverted L-shaped plan, with a bungalow unit forming a fat bottom stroke and a thin servants' and service wing running off to the rear, was popular in the 1880's. But the plan which became familiarly known and beloved in the 1930's and 1940's as the L-shape displayed the angle of its wings to the street. The living-room, dining-room or dining-alcove, and the kitchen and laundry formed the bottom stroke. Bedrooms and bathroom, linked by a glazed passage, projected in a long wing to the front. The entrance door nestled in the internal corner and was covered by a small hood, in the design of which individuality was encouraged. This plan was the popular reply to the open planning technique of twentieth-century architects. It was normally associated with corner-windows and, somewhere, a row of vertical posts supporting the eaves. A variation was known as the T-shape. Here the bedroom wing was taken back a little, with the result that the laundry and other rear appointments were in turn pushed backwards, past the rear of the main block.

(5) *The Triple-front.* Unless sliced in half to fit the mean allotments of some industrial housing developments, all the above types were known as "double-fronted", for the reason that two rooms faced the street. A variation adopted by moderately successful men with wider building lots was known as the "triple-front". This was contrived by turning



Planning in the later Nineteenth Century

(Left) The tunnel plan of workers' tenements. Average width: 17 feet (three houses to a 50-feet lot). The centre room received only sky-light. *(Right)* The vast, rambling incoherency of planning for opulence; the ground-floor plan of a house in Brisbane, 1888 (H. W. K. Martin, architect). The rooms have been juggled to present an almost symmetrical front. Otherwise there has been no attempt to compose the assembly. Rooms have been added one to another like dominoes, according only to related functions (*see also* next figure).

the six-roomed bungalow plan until its longer side faced the street, forcing an entry between two of the rooms and blocking the unused section of the internal passage with cupboards or a bathroom.

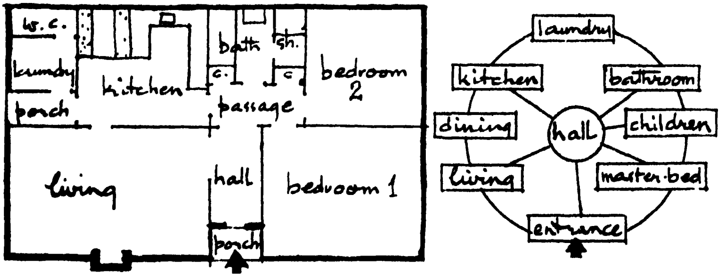
An infinite number of minor compartmental variations took place within each of these five principal types. On the higher economic levels each type was doubled in size by the addition of a second floor, reached by a stairway in an enlarged hall. There were individual adventures in free and open planning in the twentieth century and some vast rambling excursions in the nineteenth century. Multi-dwelling buildings with variously contorted unit plans always had a small place in Australian society, from the 1830's with Lyons Terrace in Hyde Park, Sydney, to the tall flat-blocks of the 1930's in the same city; but the overwhelming majority of dwellings were individual buildings belonging to one of the five types described above, mostly to that of the asymmetrical front, and generally characterized by the un-English single floor level and the un-American insistence on a formal entrance hall.

In pioneer Sydney, the lack of lime, the unsympathetic timber, primitive housekeeping and the unlimited space, combined to make a second storey inconvenient and unnecessary. Later, when the structural difficulties had been mastered and Sydney's busy commercial centre was growing up in a largely two-storey image of Georgian London, the single-storey habit remained in the outskirts, in the great majority of houses. Then the southern capitals in turn automatically adopted this plan: the town business centre and neighbouring dwellings to be two-storied (even three floors were rare before 1850) and the residential ring where the bulk of the people lived to be single-storied. The house was so firmly committed to the principle of a single floor level that even on steeply sloping sites it would not permit steps. A lofty foundation would be built up on the low side. More ingenious builders would provide the sub-floor area so formed with a door. Even the northern tropical house which later developed a sub-floor working space was essentially a single-storey house raised on stilts. Throughout the land, the cellar was known only in the largest mansions, and then only as a self-conscious liquor store.

In all Europe there was no tradition and little precedent for a single-storey urban dwelling. The builders therefore turned for inspiration to the country, the cottage of the north of England coming most readily to mind. Through all the subsequent minor variations of plan and major variations of style, the Australian urban house remained essentially, in the European sense, a country house.

At the same time the Australian country house was to take its pattern, not directly from the English country, but second-hand from the Australian city.

The utilitarian, non-competitive nature of country cottages, the old world over, was changed by Australia. In taking the cottage to town, she taught it fashion, and jealousy. She made it a vehicle for whims, as only the manors of the rich had been. Now every man could have his folly. She coaxed it to every excess; then one day, when it was debauched and staggering under a load of paste, painstakingly began to strip it back to essentials. Thus, about 1935, she eventually discovered by the most circuitous route possible, a basic surface dwelling not at all unlike the Mediterranean house, upon which she could well have drawn from the start.



Planning in the mid-Twentieth Century

Prefabricators, and planners of minimum cottages for housing estates, almost invariably returned after extensive research and experiment to this basic rectangle. Simplicity of structure, grouping of plumbing, and conventions of room juxtaposition (diagram at right) made this plan inescapable. Variables were the positioning of the w.c. (sometimes off the bathroom) and the living-room chimney. Popular features were the retention of the living-room and the main bedroom at the front (as in the bungalow plan) and the separate shower compartment and the "U-shaped plan of the kitchen working-area, with its adjacent eating "nook". Until conventions of living altered, no more reasonable plan could be found.

The basic stuff of the plan and of contemporary stylistic fashion was the same in every state at much the same time, with regional variations worked into it. Each state had its own habits, usually bred in the capital city and subsequently spreading to the country towns. Some, such as Queensland's stilts, were the result of fundamental geographical variations. Some were superficial, such as New South Wales' high-pitched hipped roofs, always taller than in other states. Some were little idiosyncrasies in trade practices, such as Sydney's habit of tinting mortar to match the bricks. Some were geological, such as Adelaide's use of stone, the red bricks of Perth and Melbourne, and Sydney's livid brickwork. In every generation little differences between states, in dress, diet, nomenclature and social customs became apparent. Some of these were subtly reflected in the homes.

In the matter of structural development, the poorest class of small cottage was if anything ahead of the other social and economic strata of home-building. When speculative builders were not successfully reducing its timbers and weakening its mortar, researchers with more scientific methods and less mercenary outlooks were evolving entirely new processes for it. Everyone seemed fascinated with the idea of producing a very cheap small cottage. This, with roses round the door and an impoverished Australian family living happily within, was the apparent goal of much of the research work done by government and private laboratories. Industry was given attention, but certainly no inventor seemed inclined to waste his capacities on improving or refining any class of house except the meanest.

Yet in the field of stylism, or fashion, most major developments were seen in the lower middle-class bracket. In this class most houses were designed by speculative builders, who judged carefully the tastes and desires of the average mistress. Thus they seldom exhibited the originality or more-or-less informed eclecticism of the upper-class houses, nor were they ever allowed to look as neglected and coarse as the poor cottages. They instigated no fashions — this was left to experimenters and exhibitionists in upper-class homes — but they were sensitive to changes of the fashion temper of society. They were often built for the owners by builders who hired a draftsman or two, and who called themselves "Builders and Architects" or some similar title. They were a nearly perfect mean of the architectural development of the country at any given time, for these calculating builder-designers always stood as close as they could judge to half-way between the sincere architect and the jerry-builder. They were the mirror of popular taste.

Taste changed slowly at first. Each style was laboriously built up from ideas in the minds of the architects arriving in the slow ships from England. After the cultivated Georgian of the early nineteenth century ran to seed in the forties, coarsened Renaissance and Gothic Revival hounded each other for half a century. This "Battle of the Styles" reached an inevitable climax in the bold, booming Italianate of the eighties. In the early 1890's the pace quickened and thereafter, until World War II and austerity, wave upon wave of exotic jetsam washed Australian shores. Fragments of Normanesque, French-Jacobean, and many varieties of Queen Anne swept over the coastal cities and splashed spray into the deepest country towns. In retaliation, as the new century began, Australian patriots arose with kangaroos, gum leaves and waratahs to adorn the face of any style. The twentieth century produced, in turn, *Art Nouveau,* the Californian Bungalow, Spanish Mission, Neo-Grec, Neo-Tudor, Modern Georgian and a solid, bulbous version of the International School of Functionalism.

For three or four years before the lower middle-class adopted any one of these styles, it would have been on display in limited instances in the well-to-do suburbs. Two or three years after the lower middle-class had done with it, it would be mimicked in cheaper materials — corrugated iron, weatherboard, asbestos cement — in the houses in the poorest parts of the towns. Thus the line of fashion twisted and tangled through the years of building, but anyone who was interested only in tracing the main path of architectural style could not lose his way if he followed the middle group.

The stylistic development of this middle group followed between ten and twenty-five years behind the most advanced local architects. In the nineteenth century, it was usually some ten years behind the popular mood of England. In the twentieth, it trailed America at a similar distance. The Gothic Revival, Queen Anne variations, *Art Nouveau*, Spanish Mission – all these styles were adopted by architects' houses very soon after they first appeared overseas. There were also some major deviations of style in Australia which the rest of the world never knew. The more superficial the change of fashion, the sooner it percolated down the building classes to the lower middle-class group. But there was a minimum time-lag of ten years between the first appearance of a new style in an architect's house and its popular acceptance.

2

First Steps of Suburbia

THE earliest shelters were urgently functional and without thought for architectural appearance. But this consideration appeared before the close of the first six months. On 15 May 1788, Governor Phillip laid the foundation stone of his house, the first pretentious building in Australia. It was on the eastern side of the cove on a prominence some fifty feet above the water. It was to be built of bricks, tiles and sandstone, prepared by a special detail of convicts and supervised by a competent bricklayer whom Phillip had discovered among them. It would be fitted with some of the five thousand panes of glass which Phillip had had the forethought to include in his luggage. And "it would serve him until a proper Government House could be erected".

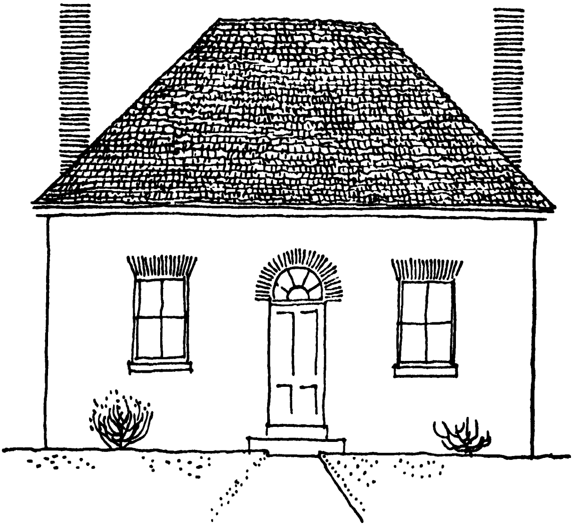
The building struggled through many difficulties, including a collapse in a heavy rain and Phillip's decision to increase the size during construction. But by 1790 it was completed. Phillip and his convict bricklayer were the only designers. It was a two-storied verandahless box with six rooms and the only staircase in the colony. Attached were smaller buildings for stores and the convict servants. In front was a square courtyard with sentry boxes, garden plots and a surrounding picket fence. The architectural treatment was described by the convict artist Thomas Watling: "His Excellency's house is composed of the common and attic orders, with a pediment in front . . . but . . . it is simple and without any embellishment whatever." However, the house marked the birth of architectural pretensions. They rapidly grew stronger in Captain John Macarthur's house "Elizabeth Farm" (1793), John Palmer's "Woolloomoola" (1800) and others of wealthy colonists; but such nostalgic fumblings of laymen were not directed by competent architects until a quarter of a century had passed.

The first conscious style was the late-Georgian, the Macquarie Style as it was sometimes called, the stately work produced by that governor of New South Wales and a handful of architects led by Macquarie's protégé, Francis Greenway, in four productive years after 1817. The public buildings had tall, plain brick or stone walls, ordered in simple masses, subdivided into symmetrical classical proportions, sparingly moulded. The spreading single-storey homesteads of the new sheep-stations were made of whitewashed walls, twelve-pane windows, french doors sheltered by fragile louvred shutters, six-panel cedar entrance doors flanked by lightly decorated glass panels, deep verandahs carried at their serrated edges by thin wooden columns — singly or in trellised twins. "Greystanes" on Prospect Hill and "Riversdale" in Goulburn, N.S.W., became famous examples of this period, but it was not only the big expensive houses that were built with dignity. The tiniest cottage of 1820 was often carefully contrived and highly finished, sitting on the dusty pavement of a sparsely settled new town, its garden behind in the manner of crowded London.

Apart from Greenway, who was too busy with public buildings to devote much time to domestic work, the architects' names were soon forgotten and the records lost. Most of the homesteads doubtless knew no architect, only the rule of symmetry, the affection of craftsmen who had never learned wrong methods, and the restraint of owners who had no neighbours to impress.

Only New South Wales knew the homestead style intimately. In Hobart the builders found a much milder sun in summer and penetrating cold in winter, something nearer the English climate which had reared the late-Georgian style. There was no call to cast the roof out in wide eaves or to build verandahs to shelter the walls. There was no need for shutters, nor for a front porch as a necessary protection for the entrance door. Plain walls were exposed in the face of the sun. In detail and construction these Tasmanian buildings were similar to Sydney's, but in form they were closer to the London model from which both were drawn. The two-storey town house on the pavement, with a curved balustrade sweeping from the street up a short flight to the unprotected front door, was a Tasmanian product which seldom appeared elsewhere.

In South Australia, where the climate was similar to that of New South Wales, and to an extent in Victoria, the Sydney style was repeated — single-storey, shuttered french windows, wide verandahs — but the social conditions of Australia and the building habits of England had both changed by the time these latter settlements were being developed. The craftsman's era was missed and building catapulted straight into the commercial era.



Major Steps of Stylism (1)

Georgian Primitive, as built in the pioneering days of all colonies, although the lack of sun-shading probably was justified only in the cooler climate of Tasmania. Note the childlike conception of the façade as a face; two eye windows, a nose front door, red brick eyebrow arches in the whitewashed wall, a brimless hat with a high crown of shingles. The only conscious decoration was a semi-circular fanlight, sometimes hollowed out of a single piece of cedar.

In the middle 1830's in New South Wales, a subtle change developed. Up to this time there had been three colonial architectural styles. Summarizing, these were: first (c. 1788-1815), the primitive child-like designs of the first settlers — verandahless, twin windows about a door, hipped roof; second (1813-21), Macquarie's public buildings — mostly by Greenway, mostly in strict, austere Georgian; and third, the homesteads — mostly craftsmen-built without an architect, their spreading plans and encompassing verandahs unconsciously the first words in an Australian building vernacular. A fourth style now appeared. In the tracks of the simple, unscholarly builders, there followed, with measured tread, the first generation of normally practising architects. Here was the beginning of commercial eclecticism, which was to lead within a decade to the degradation of creative design.

The details were refined, tooled down into the Regency pattern and polished. The houses achieved a magnificence of scale and a generosity of conception such as few future generations of Australians were to know in their homes. There were vast ball-rooms and drawing-rooms, great semi-circular projecting bays ringed by verandahs, lofty ceilings and sweeping staircases, all built with craftsmanship of a kind that could never keep pace with a popular building programme or with the impatience of the Victorian Age. Finely turned balusters bounded the staircases, whose stone treads sprang in light cantilever from the walls. Monolithic columns with finely carved capitals often replaced timber on the verandah edge. Adam fire-places and lightly painted and moulded plaster panels replaced wooden interior finishes. Curved drooping beams of the graceful verandahs were shaped out of the solid timber. Architrave moulds to doors and windows were cut from the stone of the walls. Indoors, elaborate and monumental cabinets and bureaus were placed against the carefully composed walls. The best of English furniture and appointments were arranged with an air of unhurried and confident dignity.

The style lasted, against the growing challenge of Victorian aesthetics and economics, until the 1860's. Its last exponent was the architect J. F. Hilly, whose house "Cavvara" at Rose Bay, Sydney, had the last authentic example of the semi-circular bay, projecting like a bubble from a square house. It was two storeys high and ringed by verandahs with columns below, light iron trellis supports above, and drooping roof beams.

For some seventy-five years after 1860 these buildings were to be despoiled by unsympathetic additions, allowed to decay, and trampled in the path of suburban expansion. But suddenly, in a twist of taste a century after they were built, they were to be revered and studied in intimate detail and discussed in print by architects and historians.

These big homes of the privileged had no relation to, nor influence on, the houses of the people. The typical smaller Regency house in New South Wales was built some eight feet back from the street. It had two storeys in a square plan, with four rooms to each floor. No matter what the orientation, it carried a two-storey verandah in front, often formed entirely in imported iron on a current London practice.[1] The first-floor balcony was sometimes carried on classically proportioned wooden columns, normally of the Doric order. Its balustrade was a fine lacework of cast-iron. Directly above each ground floor column was a light cast-iron ornamental trellis, ten inches wide, supporting the corrugated-iron roof.

The basic Australian suburban cottage in its deep, narrow lot was founded gradually during the 1820's. It appeared by the score around Sydney, in brick, its four rooms in a thirty-ft. square, a verandah in front, the kitchen and conveniences detached at the rear. Equipment generally consisted of one oven. Rain tanks were not plentiful. Until 1827, when Sydney's first water supply was installed — a channel from Botany Swamp — the builders followed the streams and waterholes which converged on the city. And building was cheap, with the help of convict labour. A builder asked £75 plus provisions and a free convict assistant to build a house 35 ft. by 20 ft. with a 6-ft. wide verandah.

The foundations of the other capitals were laid between

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[1] Cast-iron structure was eight years older than Governor Phillip's Australia. "The cast-iron column was the first structural material produced by [the Industrial Revolution] . . . to be used in building. As early as 1780 . . . such columns replaced wooden posts as roof supports in the first English cotton mills" (Siegfried Giedion, *Space, Time and Architecture,* p. 117).

1824 and 1837, when Sydney's and Tasmania's architectural standards were at their highest peak. But the standards set by Greenway and his followers were not imported by the military or business entrepreneurs of the new colonies.

Brisbane's first settlement, in August 1824, came seven years after Greenway's emancipation. Yet Brisbane began, as Sydney had done in 1788, as a lonely wilderness where houses had to be torn from the earth and forest by primitive tools. The story was repeated next year in Western Australia.

In 1834, Edward Henty settled at Portland and the next year, on 6 June, John Batman traded trinkets for land with the aborigines and, hotly pursued by John Pascoe Fawkner, founded Port Phillip. For many months the site of future Melbourne remained a miserable, muddy hamlet known as Bearbrass. By 1 June 1836, it had only two slate buildings, three weatherboard shanties and eight turf hovels — a total of thirteen houses with a population of 177 people, and 26,500 sheep. Bricks cost sixpence each.

In Sydney, in 1837, John Verge and his contemporary architects were building great mansions like "Camden Park", with bathrooms and gas chandeliers. In Melbourne, pioneers were living in draughty huts of turf or sods or bark strips, lit by a guttering wick in a shallow dipper of tallow. In Adelaide, selected for a settlement by Colonel Light in December 1836, T. B. Finniss was building the first house — of reeds.

Melbourne's plan, by surveyors Russell and Hoddle in 1836, was typical of the insensible, mechanical plans on which most towns were based. It was a grid of streets and no more. As in most other cases, the surveyors were preoccupied with the task of cutting the land into convenient rectangles for distribution among the colonists. Their work was reduced when they set out lines of parallel streets running north to south along the compass line, cut by others lying east and west. The topography generally was ignored. Brisbane was often quoted next century as a striking example of the failure of this rectangular grid plan technique, where roads sometimes coincided with the steepest gradients, inclined up to three in one. Melbourne, on flatter country, escaped such anomalies. Furthermore, its main streets were wide (99 feet). Melbourne was also better off than Sydney, with no plan, but the profound lack of imagination in its design was accentuated by comparison with Adelaide's plan of the following year. Melbourne, in common with nearly every Australian country town founded in the nineteenth century, was planned without regard for the comfort or enjoyment of its future citizens, without appreciation of the fact that a town-planner's responsibility extended beyond the pegging out of streets.

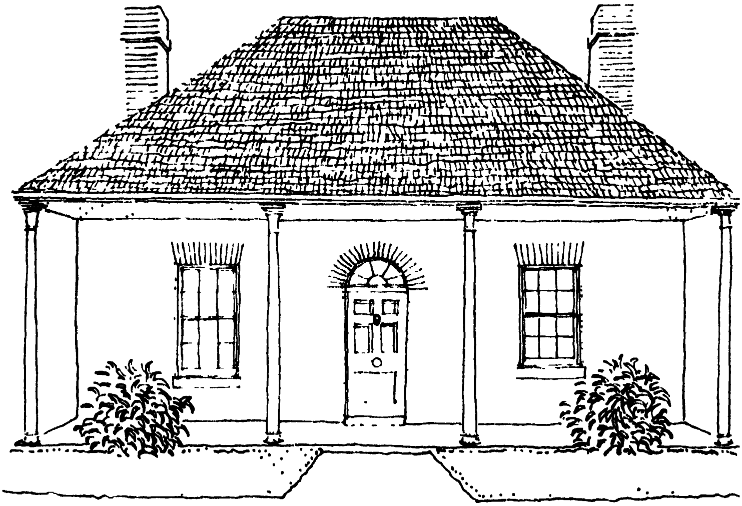
Between 11 January and 10 March, in the hot summer of 1837, Colonel Light planned Adelaide. He had been appointed Surveyor-General of the experimental colony of South Australia and had selected the site for the capital on a river plain between a crescent of low mountains and the sea. Working in an exposed dusty tent until a hut was put up for him by the marines, he drew, and pegged out, a plan that was to become world famous. It was, perhaps, the first practical city plan to show a "green belt" – a parkland girdle around the city centre. The design of this belt, the playing-field of the future city of Adelaide, probably did not detain Light for long. It was as absurdly simple as most important inventions of the period; no more than an idea. Light hated the dusty heat of the area; he thought to protect his city by a ring of shade. Having planned the streets on more or less conventional lines, he merely ran his pen around them and wrote " . . . to be reserved as Park Grounds".

The Torrens River twisted through the centre. On the south bank he planned seven hundred lots within a rectangular grid. The streets ran due north-south and east-west, in the familiar surveyor's plan for Australian towns. Half a mile to the north, on the other side of the river, he set out a smaller rectangular grid of 342 single-acre lots. Then he drew the strip of park, averaging half a mile in width, round both street systems. Within the park strip he suggested sites for some public buildings, hospital, government house, school, market, barracks; but otherwise it was to be immune from building. Any extension of the city after his grid systems were filled was to take place beyond the reserve.

Several details of Light's plan indicated enlightenment ahead of the usual surveyors of the day. For example, he broke the grid system of the streets in six places to allow public squares. But these, unlike the secluded squares of London, were threaded like beads on the traffic ways. Thus they were never effective spaces for outdoor living and only required the addition of central tramways later in the century to turn them into noisy thoroughfares. Their purpose was only aesthetic; they relieved the monotony of the grid of buildings. But the significance of the park strip was to be found not in appearance – for long hot months of the year Adelaide's green belt was yellow and brown – but in function. Adelaide was the first city in Australia, if not in the world, to provide for the health and recreation of all its citizens.

Town-planning was a fashionable topic for conversation in London about the time Light returned from Egypt to prepare for his Australian expedition. A century later, when town-planning was again a popular subject, Australian planners wondered what precedent, if any, Light had had for his parkland belt.

Seven years before his plan, in 1830, a retired officer of the East India Company, T. J. Maslen, published in London some unsolicited advice to "the wealthy friends of Australia" in a book he called *A Friend of Australia, or a Plan for Exploring the Interior and for Carrying on a Survey of the Whole Continent.* Undoubtedly Light, in his months of preparations for Australia and in the course of his discussions in London's art and literary circles, would have come across this book. In such case he would have studied Maslen's design for a hypothetical Australian town, prepared for the guidance of the wealthy friends. Maslen's diagram was based on the familiar rectangular grid, but it also illustrated some "general principles" for planning. It was presented in the hope that "the Local Government and wealthy Australians would do things well from the beginning. When once a site is fixed for a metropolis, spare no pains to ensure regularity, pleasing variety, stability and beauty." The planning principles were: (1) Two "capital streets" should cross at right angles in the centre of the town. "These two grand streets being intended for the wealthy, will thus afford the enlivening scene of . . . all the wealth, fashionable equipages, buildings and life of their inhabitants." (2) "A park [should] surround every town like a belt one mile in width." An informal playground and promenade space, this park "should not be disfigured by wearisome uniformity of trees". (3)



Major Steps of Stylism (2)

Colonial Georgian. The verandah was added, and for a brief period it was an integral part of the house, embraced by the main roof and with a flat ceiling. The only additional ornamentation was in the light, round, wooden columns. This house was a New South Wales type, and fine examples still exist in Parramatta. The verandah was not required in Tasmania. The Georgian influence passed before the other colonies began to develop.

"The churches and cemeteries should be placed outside all the buildings of every town." (4) "Every street [should] open out into the park" and (5) "Every street and every house [should] be, by law, obliged to be built with verandahs."

The retired officer of the East India Company had other ideas for Australian towns, including a prophecy of the eclecticism which did not yet show even in London. He wanted each street to be built in a different style and named to match: as well as the five orders of architecture of Italy and Greece, there were to be "Mauresque (Moorish), the Gothic, Egyptian (Theban), the Hindoo and even the Chinese". This suggestion indicated that his approach to building was as entirely unrealistic as that of most of his Australian contemporaries, but his five planning principles were far more important. For every one of them, while recognizing the inevitability of class distinctions even in the new land, was directed to the benefit of the common mass of the town. By contrast, Haussmann's rebuilding of Paris a quarter century later was concerned only with the grand vistas; behind the regular façades of his boulevards the crowded squalor of the masses was left to rot. In Australia the rich were to be permitted their fashionable equipages, of course, but they were not to be allowed to enjoy them in seclusion, as in London; they were to parade them for the entertainment of the whole city (principle 1). And the parks were not to be locked by a private key; they were to be open to everyone (nos. 2 and 4). Public health and comfort was to be considered in the back streets as in the main streets (nos. 3 and 5).

In Adelaide Colonel Light observed nearly all these principles. Perhaps he was also influenced by his admiration for some of the old cities of Italy, which he had travelled sometime in the company of Lord Byron. But it would not have been surprising if William Light, sailor, soldier, dilettante, painter, liberal, had developed private theories on town-planning. Later generations could not know what inspired his plan, for nearly all his records of thirty years of adventurous life were destroyed in January 1839. A spark caught on the thatched hut in which he was living, waiting for his permanent house to be finished. In ten minutes his collection of drawings and journals was lost in the fire.

Light's design was not accepted without the acrimony and bitter argument which accompanied all public enterprises in Australia. But the greatest criticism of Adelaide's plan centred, not on its unconventional green belt, but on the selection of the site. Almost from the start, Captain Hindmarsh, the governor and once a friend of Light, opposed the inland site. He wanted the city near the sea. Light, in a letter of 9 February 1837, to J. H. Fisher, Colonial Commissioner, explained his reasons for selecting the inland position: "In comparison with all other parts I have seen of this coast [it is] so superior, the soil so good, the plains of the immediate neighbourhood so extensive and the proximity of a plentiful supply of excellent fresh water all the year round, the probability also of one of the plains extending as far as the Murray River, or very near it . . . the excellent sheep walks in the neighbourhood, the easy communication with the harbour over a dead flat of about six miles and also the beauty of the country. . . . "

Against these arguments, the only reason for the beach site proposed by the governor was its convenience for shipping. Through the subsequent long wrangling correspondence, Light's desire for a comfortable, beautiful city capable of sharing its attractions among all its citizens was as apparent as Hindmarsh's preoccupation with the technical, commercial problem of transportation. While Hindmarsh admitted the beauty of Light's site, he could not allow himself to be persuaded by his senses in a matter involving business. Like so many future Australians, he treated beauty with suspicion: if it was beautiful, could it be practical?

Hot members of the public, struggling six miles with all their goods from the beach, at first were inclined to take the governor's side. In March 1839, Light published a *Brief Journal,* based on pages he had been able to salvage from the hut fire. In an introduction he wrote: "My enemies . . . by disputing [my choice of site] in every particular, have done me the good service of fixing the whole responsibility upon me. I am perfectly willing to bear it; and I leave it to posterity, and not to them, to decide whether I am entitled to praise or to blame." Seven months later, when Light was dying from lung disease and the wretchedness of his "sorry adventure" in South Australia, public approbation of his work first began to appear.

As Sydney's grand period of building withered during the forties, her mechanization progressed. Gas pipes were laid in 1841. A tramroad and railway company was established in 1846 and started work in 1848. Iron smelting began at the Fitzroy iron works and the electric telegraph was introduced.

The farmer's cottage grew more comfortable. It took the natural, naïve form which was to remain unchanged for nearly a century. Two, four or six rooms, according to resources, were arranged in a square. A verandah was added on three sides, rough service rooms on the fourth. The side opposite the service section was considered the front. It faced the main approach and had a central four-panel door with elaborate knocker. This front door gave direct to the main parlour or led to it through a small hall. But country neighbours were not inclined to stand on ceremony. They came to the back door and announced themselves noisily. The polite parlour, if used at all, was entered from an inside connecting room, and the front door grew cobwebs and rust on the hinges.

3

Gold and Gilt

MELBOURNE in the 1840's had courage and aspiration but no facilities. John Pascoe Fawkner, self-educated son of a convict, symbolized its enterprise by publishing the *Melbourne Advertiser,* first in manuscript and then with a few worn types on an old printing press. The rapidly growing population could not be supplied with building materials or manufactured products capable of housing it in the manner to which it had been accustomed in England. No matter how hard one worked or how cheap and amenable the hired labour, the shortages of manufactured products persisted. So for months after occupation houses remained no more than cracked shells, without flooring or ceiling, the unglazed windows boarded over. But they were elaborately fitted with valuable furniture which the owners had brought from England, and wives kept themselves busy making bright chair-covers and curtains to distract attention from the roughly sawn board walls.

Everyone who could afford it sent overseas for a house as soon as possible. Governor LaTrobe's famous little cottage at Jolimont came from England. The Presbyterian minister, James Clow, sent to Van Diemen's Land for a two-storey house with a verandah. Five-roomed houses were prefabricated in England for £125 (freight £30). Captain William Lonsdale was among the many who brought their own houses with them.

Behind Melbourne's land auctioneers of the forties came speculators and confidence men. Sales of land without title led to so many disputes that the practice of building houses on wheels was reported. There was always the danger that permanent houses would be found with one foot in a neighbouring property when the surveys were straightened out. Others were left stranded on mounds or sunk in hollows when the streets were put in. In the absence of official guidance, owners picked their own house numbers. There were three with the number 22 in Lonsdale Street.

In the first few years of the wild, rich fifties, Port Phillip began to lose such marks of neglect. Before the first year of the decade had passed she had broken from New South Wales' apron strings. Melbourne, a city of eight years' standing, was wild with delight when news of Port Phillip's independence arrived in November 1850. Free, and the proud capital of a colony henceforward bearing the Queen's own name, Melbourne set to work building with vigour. The Yarra was bridged with the world's longest single-span in stone. Public buildings broke the ground. The heady feeling of freedom had hardly passed when news arrived on 4 August 1851 of the discovery of gold.

There was a temporary, charged lull in the atmosphere as one generation of Melbournites threw their belongings together and went north. Then a new generation flooded in from other colonies and overseas, at the rate of 65,000 a year. In the gold-fields, huge canvas townships sprang up. As the money poured back to Melbourne, a new shape of house developed. Against the tradition of the single-storey box new influences were at work. The mood of the man who shod his horse with gold shoes and lit his cigar with a five-pound note was captured architecturally in higher, broader houses, with more and grander rooms and a longer passage to link them. Along Melbourne's unmade streets, the façades were splashed with sticky ornament.

But after the first wave had overrun the gold-fields and the surface had been combed bare of its riches, few of the fortune-hunters were prepared or able to dig down to the quartz. Thousands began to look for other work. Locked out from the land at least until the first Selection Act of 1861, they drifted back to Melbourne. There they found fewer jobs than people like themselves. There were more men than gardens to be tended, more women than houses to be cleaned. The uneven distribution of wealth was bound to produce, as it had twenty years earlier in Sydney, a period of spectacular homes for the successful, planned for entertaining and impressing visitors rather than for the comfort of the owners or convenience of the staff.

Nevertheless, things were becoming easier for the domestic help. The fifties was the first decade of the labour-saving device, a term which had just entered the vernacular. The "built-in cupboard", to hide away household junk as well as essentials, introduced the idea of dust-proof storage. "We never knew of a house in which the housewife considered she had too many cupboards," commented the *Australian Builder and Land Advertiser* in 1855. Something of the potentialities of the machine age was also becoming apparent. A new American washing-machine with floating wooden balls and an agitation handle was on the market.

Victoria's building boom was in full swing by 1853, with over 170 new buildings arising each month in Melbourne alone. Between 1851 and 1861, the population rose from 77,000 to over half a million. During the same decade, building increased at a greater rate, multiplying the original number of houses by eight. But still there were not enough. Over 52,000 rag and bark humpies housed a big proportion of the population in 1861, and most of these fell to pieces before the owners were able to remove to a civilized structure. In 1857, with the peak of the gold rush just turned, 115,522 Victorians were living in huts or tents or were camping out.

Most houses were of timber walls and iron roofs. Only one house in seven (as against every second Victorian house by 1900) was of brick or stone. Gradually the gold-fields quietened. Ballarat and Bendigo and various smaller towns paved their streets and settled down into everyday urban life. Building thereafter developed rapidly on the Melbourne pattern, and by 1871 the number of people in tents had dropped to 45,757.

In the middle fifties, after twenty years of speculation, collapse and disorder, Adelaide began to prosper. Growing markets in the Victorian gold-fields and the discovery of copper were broadening the economy of the colony, explorers were penetrating deeper into the unknown north, and Colonel Light's town plan was at last taking shape. A start was made on planting and fencing the parkland belt to ensure its preservation as the city experienced a belated burst of progress. Spring was in the air and in the flower beds of the raw new Botanic Gardens. The £22,000 bridge over the River Torrens was open. The first era of pretentious homes began, in stone and two storeys, north of the river.

A few years later it was evident that Light's design was accomplished. Adelaide's green belt had survived the first strain of expansion. The suburbs were growing beyond the park, as Light had suggested. This was remarkable, for many were tempted to build over the belt. Christchurch, New Zealand, a few years earlier, had failed in a similar crisis. It also had had a green belt, but when a railway tunnel was required, the city cut up and sold its green belt to pay for the tunnel.

4

Growth of the Comforts

GOLD coloured the whole picture of construction. The street façades grew bolder. English cast-iron ornaments were screwed to the wooden verandah posts and beams. The smallest town house was offered the products of the machine age. The largest house had a limitless selection of the world's materials. About 1855, structural technique, building organization and working methods took up a distinct pattern from the haphazard practices of the pioneers. New standards became recognized. Details of double-hung and casement windows, of fire-places, of painting technique (three coats), of roof framing and covering, of waterproofing with milled lead and galvanized iron — standards which were to last at least a century — came into general practice.

Windows grew larger and lost their divisional bars as glass of every kind arrived. Hardware importers in every state could offer sheet, crown, rolled, coloured or ornamented glass, and plate glass up to shop-window size.

Inside the common house, the front rooms became richer. Eleven-inch skirtings with large ogre mouldings and bolection moulded doors graced the hall and parlours. But in the bedrooms the skirting dropped and the doors grew plainer. And in the kitchen the skirting became a six-inch board on the lime-washed brick walls and the doors were knocked up in inch boards.

Nearly twenty years after it had first been introduced in John Verge's "Camden Park", New South Wales, the bathroom began to be accepted in the peak years of the gold boom, about 1853-54. The larger house was now invariably provided with a small dim room, usually borrowing its light from the vestibule or the roof, fitted with a deep cast- or sheet-iron bath and a shelf with a basin. It had no taps; cold water came in dippers from the yard tank, hot in a steaming black kettle from the detached kitchen. All urban houses had a w.c. compartment at the rear with a cess-pit below.

American cooking stoves "designed and manufactured expressly for the colonies" were in every hardware store. Coppers built into brick fire-boxes were being added to the wash-houses. More elaborate methods of combating excesses of the weather were in general use. Under the kitchen floor in a shallow cellar, milk, meat and butter were kept cool on a stone slab. Some kitchens had a small cross-ventilated recess built outwards on the southern external wall.

The most ambitious proposal was made in the winter of 1859 by Francis White, who suggested air-conditioning in a paper to the Victorian Institute of Architects. He planned a plenum ventilating system, heated by hot water coils in winter and cooled by the new Yan Yean water supply through the summer.

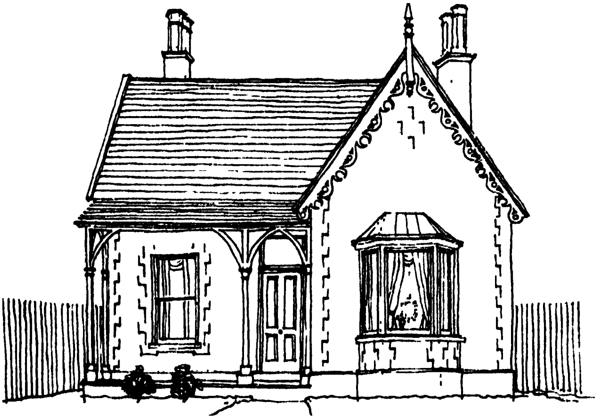
Costs soared through the gold boom as the fittings improved. A four-roomed cottage with 14-inch brick walls cost an average of £820 in 1855. Poorer houses saved some 14 per cent by reducing the walls to 9-inch thickness. Opportunists were attracted to the building trade and set up in business with insufficient funds and knowledge. Architects and intending owners found it increasingly difficult to estimate costs. When the tenders were examined, a difference of a hundred per cent between the highest and the lowest was often uncovered.

The hotter the climate or the rougher the life, the more the verandah was used. In the tropical north of Western Australia, in Queensland and the Northern Territory, the pioneers started on the lines laid down by New South Wales, a square bungalow plan surrounded by a verandah. They soon found that the verandah was more than a shelter to the rooms; it was the living-room. Gradually it grew in width and the rooms contracted to little more than furniture stores. The most convenient sections of the ten- to fifteen-feet wide encircling verandah were used for dining, sitting and sleeping. In the dry season it was elaborately furnished. The dining-room table, chairs and side-tables, even pictures and flower vases – all the paraphernalia of cool-climate life – were moved into the heavily-shaded open air. Beyond the balustrade were frangipani, poincianas, palms. The floor was oiled and polished and scattered with rugs and tropical pot-plants. The little knot of enclosed rooms in the centre was used for dressing, and for occasional sitting or dining in the few milder days of the dry season.

Various techniques were adopted to screen the sun but not the breeze at the verandah edge. The balustrade to a height of three feet was of open-timber slats or cross trellis or expanded metal grille. Above this was a gap of about four feet to the low edge of the iron roof. The gap was usually left open on the south Queensland coast or was filled with lattice work or horizontal or vertical wood louvres. But as it moved north or into the baked interior, it was filled with solid metal or wood shutters, hinged at the top and strutted out like wings from the verandah edge. In the wet season the shutters on the weather side were dropped and latched and the more perishable furniture was moved inside. The owners, however, did not choose to follow it. They sat sweltering in cane armchairs, sipping rum and combating the mosquitoes.

In Tasmania and southern Victoria, where the climate was often cold and depressing for days at a time and never uncomfortably hot for long, the verandah was still an essential to all country homes. The side on the better aspect was a summer living space used by day far more than the enclosed sitting-room. It looked over the garden lawns and the beds of roses and geraniums. The other side was a knockabout place for the children.

From about 1840 onward, in every colony, specialization had been favoured in furniture: now, in the fifties, it was not permissible for one item to serve more than one purpose. In the parlour of a comfortably furnished house there were some dozen varieties of tables, including the dining-table, coffee-table, card-table, backgammon and loo tables, a ladies' work-table and a gentleman's writing-table. In addition the front parlour had a reading stand, to set a heavy volume in comfortable relation to the davenport, and a tipped work-box beside the easy chair at the side of the fire-place. A music stand and a music-stool, book-shelves, a whatnot, a couple of extra easy chairs of varied design and four or five pictures completed the parlour. Other rooms could count among their equipment Sutherland tables with cabriole legs, fancy canterburies on castors, marble bed steps, commode chairs, ship sofas with drawers, chiffoniers with shelves and Jacobean pillars, bidets with reeded legs, children's berger chairs, folding butler trays and other items designed for a specific task and permitted to do no other though they might lie untouched all day.



Major Steps of Stylism (3)

Gothic Revival. After 1840, when the drawing-room was thrust forward to present an asymmetrical front, Georgian austerity was broken. Gothic competed with Classic in popularity. The importance of Gothic was not to be measured in quantity; it was the first conscious exotic style, the first deliberate atmospheric scene-making, with high slate gables, carved bargeboards, stucco, and a wooden porch.

Furniture retailers encouraged home decorators to pack in as many separate items as possible. Prices were never high, and during price-cutting wars new stuffed chairs dropped as low as 15s., tables to 10s. In 1850 beds with solid polished footboards and turned cedar posts sold at about £1 10s. A five-roomed house could be furnished with the required congestion for less than £90.

The Gothic Revival had edged in to favour in the 1840's.

One of its first appearances was in "Greenoaks Cottage" in 1846, at Darling Point, Sydney, a typical product of the architect Edmund Thomas Blacket. A big two-storey house with a little restrained Gothic tracery in the verandah supports, it was also one of the earliest examples of the asymmetrical-front plan and of the false half-timbered effect, which dressed its upper floors. The most prominent early Melbourne appearance was in "The Hawthorns", of two storeys, wood tracery and bluestone, at Creswick Street, Hawthorn (*c.* 1850).

Now that Gothic shared public favour with the classical, the two styles were built side by side, sometimes to the accompaniment of personal acrimony among architects as intense as the aesthetic conflict. The Gothicists built high gables pitched at forty-five to sixty degrees and made much of the bargeboards. At first they put up heavy fascias, carving them intricately by hand. Later the practice reduced itself to fretworking a thin bargeboard. A great variety of jig-saw patterns appeared. Two storeys and a tall gable-end to each wing of the building, in contrast to the cut-back hipped roof, were the marks of Gothicism in domestic building. For added colour there was an occasional pointed arch on street-front windows or a quatrefoil pierced in the verandah beam.

The Classic-Gothic "Battle of the Styles" lasted until the seventies. About this time the more enterprising builder-designers, tired of an argument for which they had no heart, began compromising. The "classical" hipped roof and heavy form was dipped quickly into a bath of Gothic detail. Windows with semi-circular arches were grouped in pairs and recessed in a shallow bay with a pointed arch of Gothic flavour. This was as near as the designers could get at the time to the Australian style ("neither Gothic nor Classic") for which the architectural philosophers of the press were calling.

During the gold period, fashion did not swing gradually; it bounced excitably between extremes. In normal times through Australia's history, most fashions changed as rapidly as the goods to which they applied were consumed. A working rule for calculating the probable duration of any fashion could have been worked out on this basis. In the nineteenth century when most houses were made of brick or stone to last a hundred years, the general development of fashion was ponderously slow. In prosperous times fashions came and passed more quickly, for, despite the fact that the buildings were still made of the same traditional materials to last just as long, the owners were often pleased to imagine themselves passing on to even better things in the near future. Under such circumstances the actual life-expectancy of a house was no more than eight years, which was about the time taken for a basic style swing during prosperities. In depressions the fashion race slowed to a standstill, while the end of an economic slump was invariably marked by the adoption of a radical departure in style — a gesture by the architects, signifying the opening of a new page of history, which was always well received.

Paint was used boldly but colour cautiously in the early Victorian era between 1840 and 1870. Black, brown, dark-stain varnish, these were the principal external hues. Window sashes might be painted black. The front and main side-doors would be grained. Back doors and unimportant woodwork would be chocolate. White was used on window frames and verandah trims. Indoor colours were often permitted to be clearer, walls and ceiling contrasting in two "fancy tints", as the architects would specify. Finely printed satin-faced wall-papers often decorated the entrance halls and front parlours.

Pride of home was never greater than it was in the 1850's. When the man of fortune built, one of his primary aims was to catch the imposing façade by daguerreotype to send it to the people back home. His second aim possibly concerned his son and his son's son. As he drove over the tracks on the outskirts of his chosen town he was thinking of a sturdy mansion which the years could not disfigure, of broad lawns and terraced gardens and trees that would grow great with the generations of his family. But often his son, in changed circumstances, sold the excess land around the house. And eventually his son's son sold the house for flats.

The sixties were quiet but constructive years. Gas and water supply came to Brisbane, Adelaide and smaller towns, but the streets were still open sewers for house waste. Expensive town halls were built in Melbourne, Adelaide and Brisbane. Railways, omnibus services, macadam roads and new stone bridges improved transport within the capital cities. In 1867 the first veneer saw reached Melbourne, and a new era of Australian furniture opened.

By this time every capital city had settled to a quiet respectable society of neat private houses. Rutted unmade roads which were impassable swamps after rain ran past rows of comfortable villas, their line broken by an occasional big two-storey house. Trim picket fences and handsome iron railings divided the public mud from the private garden, now developing with the help of water supply and the rubber hose into a precise architectonic composition of low shrubs and flower beds, nurtured buffalo-grass lawns and gravel drives. Banksias, honeysuckles and fruit trees were encouraged to give further shade around the verandah edges.

Inside, more furniture was being introduced. The parlour of the comfortable house had a grand piano, several carved wood side-cabinets and silk-panelled bureaux, two or three deep loose-covered chairs and several gilded upright chairs and a matching settee. The windows glowed behind Nottingham lace inner curtains. Heavy satin or plush velvet curtains were tied back to the architraves. A gilt canary-cage hung in the centre of the bay, and an aspidistra in a brass bowl began to be a familiar feature beneath the cage.

There were as yet few ornaments on the tables and shelves and few pictures on the walls. The fire-place surround was the central attraction and almost invariably carried a clock under a glass dome in front of a large gilt-framed mirror. At either end of the mantel-shelf a tall, thin-necked coloured vase held a small bunch of small flowers.

A little further down the social scale, around the approaches to the city centres, blocks of terrace-houses were built. They were plainer than the villas and generally below standard in finish and equipment. Most of them were of a single-storey, in brick, with the party walls breaking the roof line at roughly sixteen-feet intervals. Each unit plan was based on a halved bungalow, the blind passage running from the front door to a small rear vestibule, the rooms running behind each other down one side of the passage, tripping over a jumble of wooden out-houses at the back.

The outer metropolitan and provincial town house was usually built of weatherboards with a galvanized-iron roof. V-jointed lining-boards were giving way to lath and plaster for interior lining to all but the very poor houses. There were many of these. Every town still had its depressed areas with miniature huts, often no larger than 10 ft. by 5 ft., of split-paling walls and galvanized-iron roofs. Melbourne *Punch* referred to such dolls' houses in 1864 as the "Colonial Style".

The single-storey house in a wide allotment was constitutionally an expansible type. More country houses grew big gradually than were built big in the first place. A confusing, rambling plan of odd floor- and ceiling-heights, surprising verandahs and unexpected courtyards, became identified with a quiet and comfortable life outside the bigger cities.

In such a home lived Richard Mahony, subject of a famous novel of the next century. His author, Henry Handel Richardson, described it as "one of those characteristically Australian houses which, added to wherever feasible, without a thought for symmetry or design, a room built on here, a covered passage there, a bathroom thrown out in an unexpected corner, with odd steps up and down, have yet a spacious, straggling comfort all their own."

Through the 1870's construction continued to grow in volume, solidly, soundly and unimaginatively. There were no spectacular moves in fashion or construction, but the mechanization of everyday life was developing and the world was starting to contract. (In 1872 the first cable message was sent from England.) They were consolidating, well-fed years. At meal times the small home's dining-table was laden with beef or mutton, butter, cheese, and a variety of vegetables and fruit beyond the imagination of the workingman of the Old World. The Australian workingman's family dressed as well as and ate better than the comfortable tradesman's family of England.

Still more furniture was moved in. A successful manufacturer standing at his mantelpiece could look about him and admire – apart from useful items – an elegant inlaid Italian walnut canterbury whatnot, a beadwork feather cushion, a pair of walrus tusks and an assortment of vases covered with gilt, birds, flowers, or all three together. The walls were losing their bareness. Fine steel engravings were obtained cheaply from mail-order houses. The manufacturer's wife was often especially fond of those entitled "In Confidence" and "First Whisper of Love". He was inclined to prefer Landseer's "Stag at Bay" and the battle pieces.

In the north, geography forced architects into various departures from traditional forms. In Palmerston (Darwin) the English, Scottish and Australian Bank branch was built in 1870 as an iron frame on a bulk-concrete base. The frame was covered with corrugated galvanized iron. The base was white-ant proof and the frame proved itself some years later when this was one of the few buildings left without serious damage after a destructive typhoon.

From Brisbane, a new standard of timber construction developed through the north, replacing the southern practice of a concealed frame covered on each side. To reduce the bulk of building for rapid cooling at night, all internal partitions and some external walls were made of vertical boards only, one inch thick, secured at the floor and ceiling and at intermediate 'belt' and picture rails.

In the middle seventies, the kitchen of the ordinary house began to knock timidly on the posts of the rear verandah. Presently it was allowed to step up. It left its brick floor behind. Now it had a large black range set in brickwork across an internal corner; nothing more was built-in. In the centre of the room the versatile, lone maid laboured over a big black cooking-table. She washed up in a tin basin, drawing water from the fountain constantly simmering on the stove. She put away the everyday things in a dresser, stacked the rest – the solid silver and the glassware – and, locking it safely in the liquor cupboard, handed the key to the master.

The general maid was supported in most middle-income homes, and the housewife in lower-income homes, by a weekly visiting washerwoman. The laundry where she spent her steaming Monday had not moved on to the verandah with the kitchen. It had one tap, a pair of portable iron or built-in pine tubs and a copper boiler. Sometimes this was supported by a tripod and could be carried outside to operate, but more frequently it was built into a brick base. Waste from the pine tubs discharged into an open drain. Iron tubs were emptied outside.

Labour-saving devices for the kitchen were appearing in increasing quantity from the U.S.A. "Yankee Notions" and gadgets began to fill the dresser's utensil drawers. Vegetable cutters, egg-beaters, jelly-strainers and a variety of other handy semi-mechanical tools were offered by stores in the late seventies. Men bought more than women, who were inclined to rely on known knives. The new gadgetry was glorified in the Sydney Exhibition of 1879-80 in the Garden Palace. New stoves, washing-machines and a revolving washboard were displayed. Several makers of sewing machines took up competitive stands. A hand machine cost about £4, while treadle machines ranged from £6. Distributors of the new Wertheim model sent an instructor out to the purchaser's home to teach the technique, without extra charge. Many different ice-chests and domestic ice-refrigerators were exhibited. These were now regular equipment in larger homes. Zinc-lined ice-boxes insulated with felt, sawdust, charcoal, cotton or waste wool were available at low cost.

The extravagance of the coming boom was heralded by an occasional minor architectural orgy. W. H. Glen, music-seller of Melbourne, built "Hawthorn Glen" above Gardiner's Creek in Hawthorn in 1875, in "Scotch Baronial" it was said. The huge building was frescoed throughout with characters from the operas; twenty thousand loads of soil were delivered to form the sixty-feet wide terrace on the sloping ground in front of the principal façade.

5

Boom Style

In the seventies, Australia had been a loose collection of colonies, self-governing but always watchful for the reaction and the guidance of the parent nation. In the eighties, years before the legal act of federation, the colonies began to draw together and to think as a nation. Here was the working-man's paradise growing sunnier before the eyes; the eight-hour day an accepted principle; the trade unions exhilarated by a chain of successful arguments with capital; the optimism of a new society of liberty, equality and cobbers-all. There was a heady feeling that the world was swinging over — the old was sinking and Australia, condescendingly accepting America as a partner, was swinging round to the top. "Australia, standing on the very threshold of her glorious career, already bids fair to equal if not surpass [America]," wrote John Norton in 1888 in the trades-unions' ambitious *History of Capital and Labour*. "Milton", he continued, "with prophetic precision has unconsciously forecast Australia's future when he likens a young nation awakening to a fine sense of its destiny, to a strong man rousing himself after sleep; and to the soaring eagle mewing her mighty youth in the ethereal regions of light and liberty."

Here was the artist's paradise: Tom Roberts, Fred McCubbin, Louis Abrahams, Charles Conder and Arthur Streeton lived in tents above the Yarra out of Melbourne, their Heidelberg school of highly-keyed Impressionism recording the Australian landscape with such brilliant accuracy that some observers believed a new art form was being born. In the Sydney *Bulletin* office, Phil May and Livingstone Hopkins were forming a tradition of black and white drawing which was to lead the world for about thirty years.

On the horizon the first flashes of the scientific sunrise were rising higher;[1] Lawrence Hargrave, "the inventor of human flight",[2] was studying birds, fishes and worms in Sydney and building a model plane of paper, cane and rubber bands which flew nearly a hundred feet into the future; electricity, gas, telephones, steam-cleaning, cable trams, improved railways and better water-closets were easing the life of the ordinary man; typewriting at a hundred words a minute and the development of the newspapers with many dailies and numerous weeklies in every city;[3] literary reviews, art and music criticism, a new licence in religious discussion — and something else. "In those days, there was created in the Australian bush (or, in the *Bulletin* office of the bush) a confident, vivacious, demanding mood which coloured the Australian outlook."[4]

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[1] There was an announcement that a new process enabled an adult's body to be squeezed into a solid block about one cubic foot in size, hard, durable and odourless — demonstrated by compressing the corpse of a child, with a nice sense of reverence, into a small cross.

This mood reached suburbia about 1882. At first it was apparent on the house as a change, not of character, merely of expression. Builders still aimed in the general direction of Italy, but they had more ideas of their own to add. "Novel" and "fashionable" were used more frequently as commendatory adjectives.

Wall-papers changed from unobtrusive backgrounds to a strong feature of the room. The wall was divided into panels about six feet wide reaching from the skirting to the picture-rail. Each panel was bordered by a floral frieze, with a knotted floral centre-piece.

Meanwhile the suburbs were spreading out from the cities on the new railway lines across the surrounding farmlands. In a decade the population of Sydney and Melbourne grew by nearly 75 per cent. East of Melbourne in 1882, Camberwell, Canterbury and Surrey Hills, three areas which were to become the proudest centres of pure suburbia in all Australia, were opened in market gardens and dairy farms beside the Box Hill railway. Adelaide's suburbs, clear of the ring of parks, spread over the plain without a moment's thought of repeating the treatment Colonel Light had specified fifty years earlier for the first overflow. There were no more green belts; just houses, streets and houses, headed for the mountains and the sea.

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[2] He announced to the Royal Society of N.S.W. in 1884 the first credible prophecy of artificial flight.

[3] In 1880 Ballaarat, Geelong and Bendigo each had three dailies. In the 1950's they have one each.

[4] Brian Fitzpatrick, *The Australian People*.

On each bare hill-top a great mansion appeared, threw a high iron fence around itself and withdrew behind a rising curtain of nurtured deciduous trees. Little houses spotted the ground outside the fences, emulating on their façades the banquet-hall atmosphere of the mansions. Weatherboards for the street front came in wide rebated sheets disguised as stone. The galvanized-iron roofs on their front verandahs dipped in a sudden curve like the brim of a sundowner's hat and were draped at the edge with cast-iron, like corks on the brim to frighten away the flies.

Cast-iron lace-work was now made locally in quantity. It was supplied to the builder in various shapes and standard sections which could be used to enrich any part of the verandah — straight lengths for the underside of the bressummers, triangular pieces to fix against each side of the verandah post, panels for the balustrading. All were supplied with screw holes for easy fixing to the light wooden verandah frame. Now posts were cast as well, in the form of thin, fluted columns with overgrown heads, usually in the shape of Ionic capitals. Classicism had at last won the "Battle of the Styles".

An adequate selection of lace-work patterns was produced. Some of the earlier ones were geometrical, but most were floral and faunal, and a few introduced patriotic themes such as colonial coats-of-arms. Void and solid were fairly equally balanced with a resultant consistency similar to that of an afternoon-tea d'oyley. The patterns repeated themselves at close intervals. They were intricate to the point of obscurity. Castings were rough and broken edges were not apparent.

Here was a fashion in applied ornament so brash and enthusiastic and universal that it almost grew out of the class of decoration into the dignity of a style. It lay indiscriminately on the houses of rich or poor, on stone, brick or timber structures, transforming them all with its own overpoweringly fruity flavour.

Meanwhile the roof had swung far away from the Gothic gable. The ridge was kept low by framing the roof in an

M-shape with an internal gutter hidden by a straight front. The slate covering was hipped back at the ends. The room projecting towards the street was splayed off in a semi-octagonal plan. Indoors, deep plaster moulds surrounded niches and wall panels. Ceilings provided a clean slate and wonderful scope for the decorator. Lath and plaster made the most familiar flush base, but wood panelling was used when sufficient money was available. In each case cast plaster decorations were pinned on the surface. Cornices were broad and heavily moulded. An acanthus-leaf rosette marked the centre of the room. The Art Metal ceiling, pressed from thin sheet iron, was manufactured locally. It had floral panels and ribbed straps in half-hearted imitation of wooden construction. Architraves to doors and windows and skirting boards grew inches in size and were deeply carved. Floors were laid with narrow boards. Around the perimeter, where they would be exposed beyond the carpet fringe, they were parquetted in geometric patterns of various coloured woods. Verandahs and porches were paved with mosaic tile. Windows were large, great double-hung sashes starting at the floor line and finishing about nine feet up, in line with the picture rail.

The largest mansions adopted Baroque forms with vigour and sometimes with imagination. In a huge Melbourne residence[5] which became known as "Davis's Folly" after its land-speculator owner, something of the internal spatial atmosphere of an eighteenth-century central-European church was reproduced by the architect Watt. The house sat in a green park, a great grey stucco block, honeycombed on the west side by deeply cut balconies behind a two-storey arcade. A visitor approaching from either side was led through a low confined entrance lobby. But a few steps further on, the vast space of the hall burst upon him. It was in fact a roofed internal courtyard, soaring fifty feet past two lofty storeys to a central fanlight. It was ringed by a wide cantilever balcony giving access to the first floor bedrooms. It was handsomely fitted with a grand staircase, elaborately carved doorways in simply pilastered ivory walls, and what was credited with being the largest parquet floor in the southern hemisphere. Stylistic adventures in other large houses led to occasional returns to Gothic, to Moorish and even Oriental forms.

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[5] In Willoby Avenue, East Malvern; later Malvern C. of E. Grammar School.

During the 1880's, as the boom developed, the colour deepened, the forms stood out rounder and bolder, the detail in shadows lightened. It was as when the lights on a music-hall stage are brightened by imperceptible degrees as the finale approaches. Eventually the scene was dazzling. Every big house had an arcade verandah. In large and small houses, coloured leadlights filled every fanlight, statuettes and urns crowded the parapets, stucco left the external walls, and mixed coloured bricks were laid in stripes and radiating arches. Caryatides, statuettes, urns, marble inserts and curved glass bay windows smothered the street façades. Indoors, if the builder left any wall plain, the owner covered it. Before long even the floral wall-paper was almost hidden by pictures. Photographs and engravings were plentiful and cheap, but a mirror or a water-colour — anything that could support a frame — was acceptable. Where the wall looked through it was fitted with brackets, painted fans, corner shelves or hanging cabinets. Vases or statuettes sat on every shelf. Ingenuity constantly added new effects. A bedroom mirror would be treated as the basis of a scene of a pond, with bulrushes and butterflies painted round the perimeter. Three child's spades bound about the middle and spread as a tripod would support a bucket with a growing fern. Silk bows on bed and window valances were to be much admired.

The big houses of the eighties were built for entertainment by the extroverted merchants on whom the boom had loaded its riches. "Welcome is the best cheer" read the lead-lighted caption in the door of "Norwood", 1891, a vast fantasy in red brick in Brighton, Victoria. Within great estates, screened from the neighbouring suburb by big trees, fairy-tale worlds were created. Deliberately mixed period ornament, lofty reception rooms, banquet halls, ball-rooms of fabulous panelling and mosaics, coats of mail and shields and exotic weapons, plush four-poster beds, countless mirrors — all of this and a flow of liquor for the happy house-guests of the boom.

On Sunday mornings a new noise was heard in the suburbs, the rattle of lawn-mowers. In 1869 the spiral-blade mower had been patented in England by the firm of Fellows and Bate. A few models were seen in Australia through the late seventies. By 1880, the machine was fully developed. The model which won a diploma at the Melbourne Exhibition in 1881 was efficient enough to remain unaltered for seventy years as the principal piece of exterior equipment on every property. The "amateur's" lawn-mower, as it was advertised, was cheap – £2 or £3 in the eighties – and it changed the character of the garden. Now the poor man could have a croquet lawn finish to the grass about his house without the toil of scything and rolling. He relished it.

Previously, the street garden of the small house had largely consisted of hoed earth broken by shrubs and annuals. Now the square of grass began to grow. The flower-beds shrank to strips around the perimeter. American mowers stole the market for many years, for the low wheels of the early English machines sank into the spongy buffalo grass which was general in coastal cities. English manufacturers later enlarged their wheels to suit Australian conditions and in 1923 locally-made machines were to add their voice to the growing suburban purr.

Contrary to Boom Style extravagance in form, colour was at first strangely subdued. Owners wanted to show that they had money; they were not interested in vulgarity for vulgarity's sake. Externally, the Italianate buildings were invariably cement-rendered in imitation of stone. Internally the columns and pilasters, the wood and plaster panelling of walls and ceilings, were painted ivory-white or in soft greyed colours. A favourite tint was putty-grey. As the boom pressed on, harsher colours appeared. Reds and purples and a frequent fierce orange and blue combination were used as accents in leadlights and paper friezes. The general tone of the floral wall-paper deepened to a dim warm neutral. About 1888, marble fire-places in the front rooms began to be replaced by wood, inset with panels of coloured tiles.

Architects were on the alert for new materials and methods. The most accurate prophecy of 1888 was made by

John Ellis when he proposed glass bricks. "The bricks, if made hollow . . . would be about twelve times the strength of an ordinary clay brick and about half the weight. . . . Buildings would be healthier, lighter and more durable." All but half a century later his idea saw brief, breathless life as a fashionable product in a season when glass, chromium-plated metal and other hard, shiny objects suddenly found favour.

The Boom Style underwent minor regional changes without loss of character. H. W. K. Martin's design for a mansion in Gladstone Road, Brisbane, in 1888, retained the Queenslander's elevated floor, ten-ft. verandah and iron roof. Between these he sandwiched the expansive, broken plan of the southern house with an imposing entrance hall, reception rooms, dining-room, morning-room and drawing-room, and a huge bedroom wing. He built in brick with cement dressings and stone trimmings in a style "adapted from the Renaissance to suit the conditions of the climate", as a contemporary report put it.

Less fortunate people had the decoration without the scale. In the inner suburbs of Sydney, Melbourne and Adelaide, two-storeyed terrace houses were built for rental investments. Whole blocks from street to street were covered with these vertebrated buildings. The street front had a two-storey cast-iron dipped verandah, capped by an ornamental parapet with an urn sitting atop each party wall. Un-Australian in type, they had little or no front garden. Each unit was seventeen to twenty feet wide. Dozens of units on end looked exactly alike, but the builders restored individuality with different names – such as "Fontana" – set in cement scrolls or shells in the parapet above each unit.

The poor terraces of the sixties had by now developed into slums. They were inextricably tangled with evil-smelling factories. They were still inadequately served with water and drains. The mean back-yards had long since lost any trace of foliage. Disease destroyed the grass.

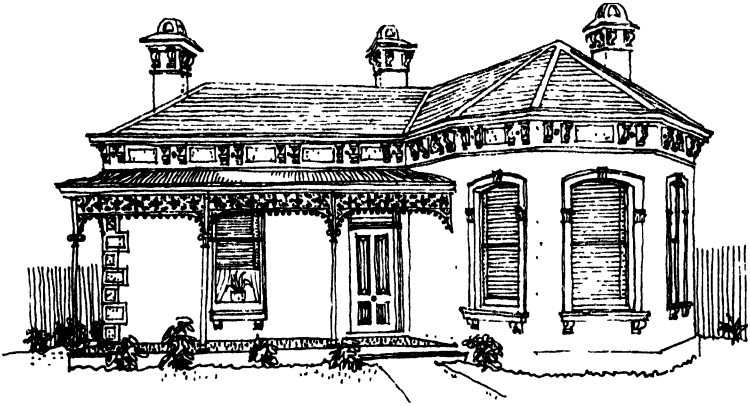
And still more terraces were being built. Supporting the boom from behind, in narrow, treeless streets, were rows upon rows of combined brick cottages. They were thrown together, cramped and skimped, cracking at the corners even before the paint was dry. The verandah as usual faced the street. It was no more than six feet wide. Behind it was the window of the parlour and at one side the panelled entrance door. When the door was opened the dappled shadow of cast iron from the verandah fringe crept a few feet down a pinched, interminable passage. One side of the passage was blank, against the neighbouring house, and hung at about ten-feet intervals with minute photographs. Its other side gave on to the three main rooms, the central one sky-lit. The passage end showed a dim light from the rear verandah. The kitchen and wash-house were built in timber as part of this verandah.

The visible parts of these buildings were sometimes reasonably well executed, but the unseen parts — drains, flashings, damp-courses, foundations — were usually below standard. In a few years water crept up the walls, the plaster cracked and bulged away from insecure brickwork, the drains blocked and black patches spread on the ceiling. It was the golden age of jerry-building.

In outer suburban work the proportion of "improvers" to skilled tradesmen was growing out of hand. They were young men who had not been apprenticed but who picked up the trade as they worked. They welcomed the lack both of discipline and of the expense of apprenticeship. Their employers welcomed the lack of responsibility and the cheap labour. They built rows of small detached frame cottages, covered externally with mock stone boarding on the street front, and with weatherboards on the windowless sides, lined internally with V-jointed, horizontal, varnished boards.

Over six hundred builders and a hundred architects were operating in Sydney alone in 1888. A small cottage cost about £300. A handsomely finished house of some ten rooms and a servants' wing cost £2,000 or £3,000, but many of the larger mansions ran up to five figures. Builders were not in the habit of taking out accurate quantities when pricing plans and specifications for tendering. The basic variation between different houses in the same economic class was so small that they relied on pricing by overall volume. The average cost for luxury work in 1888 was one shilling per cubic foot. Standard high-quality building cost ninepence per foot and the poorest houses dropped to about threepence.

Building societies opened in the back rooms of every second office block. Every city possessed dozens, competing with each other in generosity to the homebuilder. They lent up to ninety per cent of construction cost on terms which theoretically would have kept the house-owner paying monthly instalments until about 1933. In fact, most of them were to collapse with the banks within the next five years.



Major Steps of Stylism (4)

Italianate. In the Classic School after 1850, the Italian influence increased gradually in competition with the Gothic revival. By 1880 the façade was more heavily ornamented (as above), but had undergone no basic change. Slate roof, iron porch with cast-iron lace, grey stucco, mosaic-tile porch floor, heavy four-panel door, and dark-green venetian blinds were prominent characteristics.

Extremes of the boom did not affect the small house. It continued in its placid way, a double-fronted central-passaged, asymmetrical box. The typical house of the late eighties had six rooms and a minute bathroom under a slate roof, plus a vestibule, maid's room, kitchen, scullery, and w.c. under a corrugated-iron skillion at the rear. The front door had a stained-glass surround. The central passage was some eight feet in width for the depth of the two front rooms, then narrowed at an ornamental archway for the remainder of its run to the vestibule. The front rooms and front hall were papered in a dull, small pattern, finishing at the picture rail with a heavily coloured frieze. Damask-textured ivory paper lined the top of the wall and the ceiling, twelve feet overhead. A heavily moulded, undercut cornice broke the paper at the junction of wall and ceiling. A gas pendant hung from an elaborate plaster rose in the centre of each room. Tall double-hung windows were shaded with dark green, white-taped venetian blinds. A low grey or pink marble mantelpiece surrounded a shallow black-iron arched grate.

The four other rooms in the main block were similarly papered, but there were no plaster cornices and the mantelpieces were of wood. Every room except the maid's had a fire-place. The maid's room was plastered, but the vestibule and kitchen had only whitewashed brick walls.

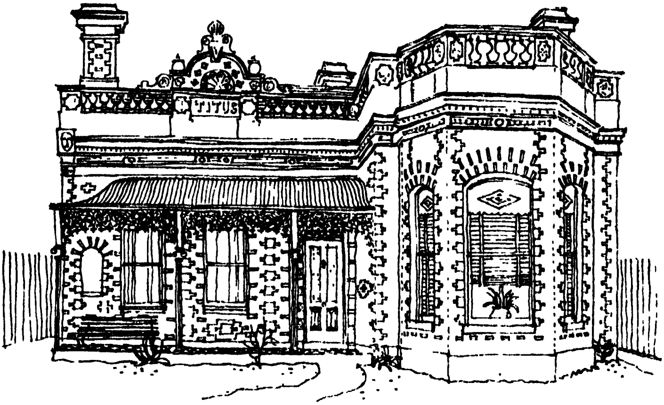
Furniture was square, heavy, dark brown, lightly carved, and enlivened by brass handles and candle brackets, gilded mirrors and ivory inlays. Many chairs were upholstered in dark American cloth. Each bedroom had its marble-topped washstand, with a white china jug, within a china bowl, beside a china soap dish.

The fight against the Australian summer, carried on by darkened rooms, was being intensified with new weapons. Ice-refrigerators were in many homes. Most were still imported from U.S.A., but Australian models were appearing. In 1885 J. B. Witt, managing director of the Victorian Atmospheric Refrigerator Company, devised two methods of cooling by a general ventilation system. In one case he connected the air ducts through a chest containing ice and salt; the air was kept dry. At the Victorian Centennial Exhibition he showed another. Air was drawn through a patent evaporator, which impressed visitors from overseas. Charles Coombs patented an ice-box in Sydney in 1888 based on the principle of separate compartments in which he successfully stored fish, meat and bread without any interchange of odours. He insulated the walls with two-inch wood slabs separated by a two-inch air-space.

The wonders of applied science were now distributed more evenly throughout the country. From 1890 forward, each capital city and most provincial towns moved forward in unison. Perth, isolated on the western corner of the continent, had trailed far behind the eastern capitals during its first quarter-century. The few small farms did not venture far into the bush from the township of timber huts. Some lack-lustre pearling around the long north coast brought a sufficient but modest income. In the sixties, farms began to spread from the town; in the seventies guano deposits in the north were worked; gold was found in the Kimberleys in the eighties, and at Coolgardie and Kalgoorlie in the nineties. Then the gold-seekers, arriving from the eastern cities and surprised at the primitive state of the colony, demanded electricity, telephones, baths, rail and sewerage systems. In the nineties Perth began to pursue her sister cities of the east in the acquisition of mechanized comforts. She never quite caught up, but she managed to retain something they soon lost. Her site on the wide winding shallows of the Swan River rivalled Sydney's in beauty, but not in commercial potential. She was able to keep more of her waterfront comparatively unspoilt and to develop it for public enjoyment.

Through all the extravagance of boom building, architects maintained an intermittent but conscientious belief in the reasonable and genuine nature of the work they were doing. "Generally the current of popular taste is being led to flow with more and more sparkle in the direction of fitness," wrote E. Wilson Dobbs, architect, in 1892. He was discussing the contemporary Romanesque revival. "Fitness as regards internal planning and construction . . . in domestic architecture . . . will form the basis for the new departure in the immediate future into a distinct Australian style of architecture." Future generations could see no other phase in history more remote from Australian characteristics.

Architectural criticism in trade journals and in the popular press was never keener. The current taste did not pass unquestioned by the educated public. The confusion of styles, the nervous desire always to be new and original, was often under the fire of knowledgeable critics. The excessive attention lavished on the exterior, and the inadequate thought given to planning, did not go unnoticed by the public. A critic, quoted in *The Builders' and Contractors' News* (Sydney) in 1887, described how the contemporary architect apparently designed a house: "Seeing the salt-cellar standing on the dining-table with the pepper-castor and the mustard pot on either side, he looks at them with the artist's eye, and at once evolves a new variety of castellated villa . . . The villa architect takes a cathedral front and slices it up longitudinally; then an Elizabethan house, or a Chinese pagoda, a railway station, a hen-house, a dovecot, a pigsty — for art knows no distinctions — and . . . has an infinite number of phrases to work with and can vary the air to any extent . . . The inside, like the meat in a penny pie, is generally an after-thought."



Major Steps of Stylism (5)

Boom Style. In the late eighties and early nineties, ornamentation lay heavily on the façade. The slate roof was hidden behind a stucco balustered parapet, brown, red, and cream brick patterning predominated, with a cast-iron verandah, brown venetian blinds, and vivid coloured-glass side and top panels to the front door.

But a more consistent line of architectural writers maintained earnest enthusiasm and boundless faith throughout the boom. "In the dawn of the twenty-first century," wrote one of them, "one hundred and ninety million will here be gathered together. Who can picture the possibilities of that stirring time, the wealth of our resources, and our achievements in the arts and sciences, with new worlds discovered, doubtless in the Antarctic circle, reflecting added grandeur to this newer Atlantis under the Austral Cross? . . . Great and glorious then, are our opportunities; may they be most mightily manifested throughout Australasia in the added triumphs of Architecture."

The year 1892 marked the popular return of polychromatic paint and brick for the first time since the gold-rush. Stripes of brown and cream interlaced the common red brick of the walls. Coloured leadlights lit the hall from either side of the entrance door and the front rooms from fanlights above the windows. White disappeared. Cream was nearly as light, and was warmer. It did not show age so obviously. It did not glare with such intensity in the summer sun. It was not as cold as white, nor as dull as brown, nor as dominating as the ochre of the poorer timber houses. It was, in short, the ideal inconspicuous compromise, and it was to become a national habit for over half a century.

6

The Functionalist Century

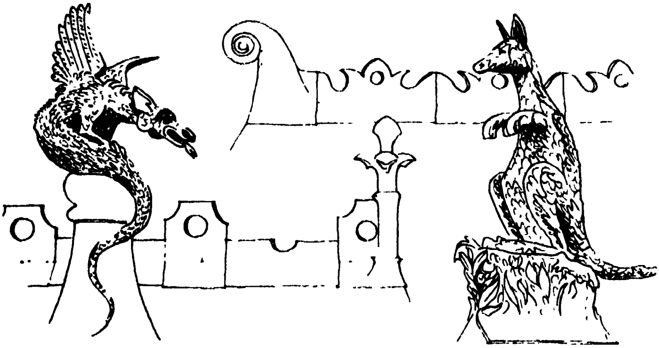
BANKS, thousands of newly-formed companies, and the handsome Italianate period of domestic architecture, all collapsed in 1893. When the building industry revived, it embraced a style which had been growing quietly for ten years, a more homely style which expressed the chastened feelings of the sadder and wiser late nineties.

The new fashion was called "Queen Anne". It was based on the red brick and the newly-imported terra-cotta Marseilles-pattern roofing tile. It was, one felt, English in character. All trace of grey stucco was gone. Bricks were tuck-pointed. Grey slates changed to red tiles and the folded M-shaped roof was pulled out into a high, all-embracing cap.

Every feature and principle involved in the Queen Anne style was as deliberately contrary to Boom Style as this change from grey to red. From formal symmetry, the plan and silhouette crumbled into a disordered assortment of bays, dormers, porches and spires, attempting in a desperate chorus to look "picturesque", which was the new watchword. A great steep-sided cone, centred over a semi-circular bay window to the front room, often broke through the main hipped roof. This cone was capped with a decorative terra-cotta finial. In Melbourne the finials became a major feature. "French Grotesques" — dragons and griffins in lowering attitudes — were imported with the tiles from Marseilles. One Melbourne tile manufacturer (Rocke's) reproduced them in quantity, casting from the French models. Two rival firms, encouraged by the Victorian government's protection of local manufacturers, just prior to federation designed and cast their own finials in the forms of kangaroos and emus. Where no cones existed, the finials frequently adorned gable-ends.

Perth, still in its first flush of success after the Western Australian gold rushes, grew into a Queen Anne city of red bricks and orange tiles. A rising generation knew of no other manner of building a house. The few early stone walls and slate roofs were soon lost in the red crowd.

The two storeys fell back to one. The continuous terrace houses were replaced by the "semi-detached" pair of houses, symmetrical about a party wall. Wooden trellises replaced cast-iron on verandahs. Interior plaster ornament was reduced slightly in favour of wooden fretwork. Windows changed from double-hung to casement sashes.



Terra-cotta Roof Ornaments

An imported "French Grotesque" for a pinnacle, a Melbourne-made kangaroo for a gable-end and two stock ridge-tile mouldings. The kangaroo was decorated with suggestions of Australian flora; his forelegs were fern fronds; he sat on a gum-nut covered stump. These ornaments were introduced (*c.* 1890) with the Queen Anne red-tile era. The larger sculptured pieces were most common in Melbourne. They lingered on until shortly after the end of World War 1 and the beginning of the Bungalow Style, by which time they were occasionally painted green to match with the new cement-tile roofs.

Windows had made this change before. Casements could claim to be the original Australian windows, for the primitive first huts were invariably fitted with hinged shutters, and some of the earliest glass panels were hinged for simplicity. The Georgian twelve-pane double-hung window and the French window, lately introduced to England, were equally popular in early New South Wales. Through the long Battle of the Styles, the double-hung remained loyal to the arched

Renaissance school, the casement generally stayed within the Gothic Revival. In the twentieth century the conflict of window types was to become in general an issue between architect-designed and builder-designed houses. The latter generally favoured the double-hung window, for no other was so fool and weather proof. Many architects, disturbed by the strong central line of the meeting rail and the clumsy counterweight boxes, were inclined to favour the casement.

Queen Anne, in her strange Australian costume, was the first of some half-dozen major exotic or period revivals which were to follow each other at decreasing intervals during the first half of the twentieth century. As the first, she lived longer and was more widely accepted than any other. She was subjected to minor variations known as "Dutch Queen Anne" and "Monumental Queen Anne", and was infused later with "New Art"; but her ruddy turbulent characteristics remained virtually unaltered until 1914. Essentially a heavy brick style, she seldom visited the timber-building districts, but vast areas of green land around the southern cities slowly turned red in these years.

The fundamental principle of planning a big Queen Anne house was to be quaint and picturesque, with passages twisting to allow nooks and angle bays in sitting-rooms and dining-rooms. But there was little scope for this approach in the small house of the early twentieth century. Some changes were made in the rear. The skillion extension changed character and was sometimes omitted. The vestibule disappeared. The sleep-out, fly-screened above a wooden base about three feet high and serving as a casual extra bedroom, was substituted. For the first time, the kitchen was given the consideration of an ordinary room. Its window grew to normal size; its walls were plastered.

In 1894 the patent gas cooker was invented. It introduced removable burners for hot plate and oven, and it radically affected cooker design and the popularity of gas. In the early years of the new century gas stoves were imported in quantity. The potential influence on kitchen design was immense. Gone was the need for a big brick chimney-piece to carry the one-fire stove. The gas model could sit anywhere with the merest hood of galvanized iron above it. It could be placed beside cupboards or against the sink, convenience alone dictating its location. But for nearly forty years the kitchen resisted the influence. The gas stove, like a surprise visitor, was given a shake-down in the chimney-piece vacated by the fire-stove. Until the late 1930's, when the "streamlined" kitchen was born, builders went through the solemn ritual of building a brick monument to the memory of wood fuel around every new gas cooker.

Housework diminished as services were extended early in the twentieth century. The number of minor kitchen aids from the U.S.A. increased, but simultaneously the number of domestic servants decreased. For the middle-income woman, mechanical and social advances brought more work and more worry. It would be a long time before house chores were accepted as a part of a gentlewoman's day. In the meantime, keeping up appearances without the support of a servant doubled the hardship of the physical labours. But social life and drudgery were to mix more and more as the century grew up.

Black-iron wood stoves, and the early gas models which imitated them, were stylized in the general character of the Italian Renaissance. The legs were elegantly splayed and grooved. The doors were deeply panelled with ornate applied hinges. The fire grille was cast in intricate openwork. The whole was surmounted by a wide projecting cornice. There was hardly a square inch of surface that was not grooved or moulded in a manner to suggest that the stove's prime aim was to collect cooking grease. Cleaning these devices was a rare ceremony. A correspondent of the *Home Journal* listed the apparatus and procedure: "to keep stoves shining with the least possible labour, provide several paper bags, a pair of men's canvas gloves, a good brush, several large pieces of old flannel, two smaller soft cotton rags, a package of stove polish and a bottle of gum asphaltum, burnt alum, turpentine . . . I use the paper bags to protect my hands when applying the mixture, as it hardens the gloves." Many housewives were content to coat over iron and fat and boiled-over milk with stove-black.

The most provocative piece of equipment for the year was a folding bath, complete with waste fittings, sponge basket and towel rails.

In 1902, the principle of solar planning for homes was first proposed by an architect, Walter Butler.[1] He explained how to exploit the difference in the sun's altitude in summer and in winter. He was the first to advocate a northern exposure for all rooms and an eave of calculated width which would shade the glass only in summer. This was a revolutionary suggestion. Every previous generation had avoided the north for their main rooms and the best windows.

Queen Anne's gardens were far more formal than her buildings. They were based on buffalo-grass lawns, broken only by a gravel path, twisting in a slow "S" to the front door. Narrow flower-beds lined the side fences and a tall, opaque cyprus or pittosporum hedge, trimmed to velvety smoothness, hid the street.

Australian trees were seldom allowed to remain, although a few decorative English trees were planted. This indicated that the Australian's apparent distaste for trees stemmed not from his heart but from his head. It was based on consideration of the real-estate economic term "improvements". Having in mind always the asset which his home represented, the owner was keen to effect as many improvements as possible. Improvements of course had nothing to do with improving the appearance or comfort of the property. The term could best be defined as changes from nature, for better or for worse. Every native tree chopped down made a simple but spectacular change from nature, and thus represented money in some hypothetical future bank. An English tree, on the other hand, was less natural and could almost be considered an improvement. A trimmed hedge or a cyprus cut into a kangaroo shape also qualified.

Outside, the cast-iron capped Boom Style garden wall had diminished to a wooden picket fence about four feet high. The top of each picket was fret-worked, and the whole was painted light buff. Posts were sometimes featured in chocolate. This was to be the favourite external colour scheme for nearly twenty years.

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[1] Paper to the Health Society, Melbourne, 4 Oct. 1902.

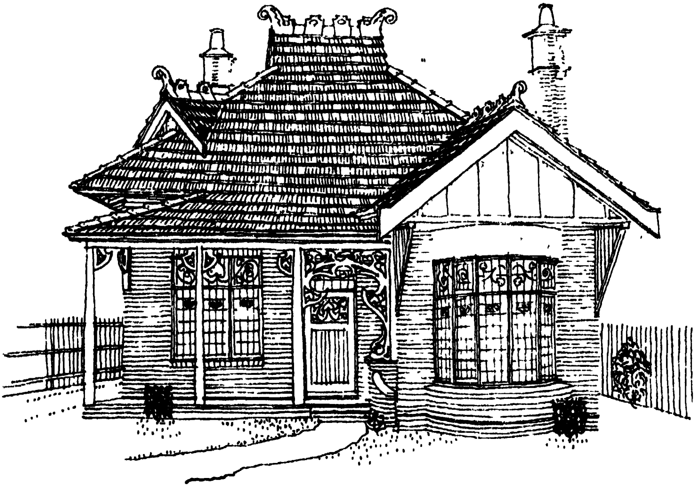
L'Art Nouveau took less time than most fashions on the trip from Europe. It had first appeared in Brussels in 1893, a sinuous and fairly superficial style, deliberately designed to break with all decorative tradition. Its foundation was a flowing, sensitive line. It appeared in Australia before the end of the century, in city office and professional buildings and in restricted form in a few homes of travellers. By 1901 it was becoming the rage. Curves of paint, plaster, leadlight, wood and wrought-iron grew about the doors, windows and balconies of every house. But the flow and sensitivity had not survived the ocean trip. The line was thick and broken. Soon it was asked to represent something; it sprouted leaves and tulip buds, and still it grew. By 1905 the somewhat irrelevant theory that "nature abhors a straight line" ruled the decoration of jewellery, household equipment and furniture.

"L'Art Nouveau is still in its youth," wrote the *Australian Decorator* in 1905. "Into what it will develop no one can say. It may have before it a long life in which it will reach a greatness that shall equal the Greek; or it may die young . . . " It did.

Those conservatives who did not embrace *Art Nouveau* nevertheless adopted the informal back-to-nature spirit of the new century. Wire baskets and decorated drain-pipes carried growing plants on to verandahs and porches. It was a season for flower-lovers. "Your discarded sailor hats will make beautiful flower-baskets," advised a writer in the *Home Journal,* in November 1905. "A piece of wire covered with a bit of bracken will form the handle, while the brim dampened will yield readily to the desired shape . . . when dry, it may be stained with thin paint, almost any desired colour. A basin may be set in the crown to hold water, or wet moss may be partially wrapped in oiled paper. This basket remains pretty a long time."

This was the season for parlour tricks: wall-beds which looked like closets, closets which looked like closed liquor cupboards, liquor cupboards which looked like bookcases ("a cornice on the top added to the effect and a keyhole with a key in it completed the deception"). A home decorator told of a washstand that shut up, "and when Shakespeare's bust was standing on it, with a book or two at the foot, it looked quite like a pedestal."

This was no time for a bare wall. Excellent reproductions were offered for a shilling or two. *The Review of Reviews* *for Australasia* advertised collotypes of popular paintings ready for wall framing at 2s. 6d. each. "Many experts valued them at 10s. 6d., so none can excuse themselves for having bare, unsightly walls . . . " Half a guinea bought from another source a set of friezes, each fifteen feet long by fifteen



Major Steps of Stylism (6)

Queen Anne. A red style, beginning with the economic recovery of the late nineties and lingering on to World War I. It was a revolt against the grey, ornate, solemn Boom Style. Chief feature was the broken, "picturesque" roof with false gables and frilled ridges. Wooden trellises replaced the cast-iron on verandahs. At first the trellis work was geometrical; after 1900 it became sinuously curved (as above). *Art Nouveau* also appeared in the leadlights of the casement windows and fanlights. Wooden verandah floor, rough-cast walls above the bay window and on the "half-timbered" gable-end, red tuck-pointed bricks, orange-red terra-cotta tiles, and brown and cream paint were associated with this first of the twentieth-century fashions.

inches deep, by M. Paul Albert Baudoin, depicting "The Cornfield" in five separate parts.

It was in 1902 that the heart returned to home building. From then until 1910 it appeared in the most literal form, a fat, sensuously rounded heart-shape, red when it was allowed colour. It was beaten into copper, inlaid in or cut out of wood, worked in silks, wrought iron and plaster. Inverted, and fitted with a stem in the valley of its cheeks, it became an unholy bloom on the vines of *Art Nouveau* in leadlight and paper frieze. It was the first fashion shape of the new century of fashion shapes. Later the skyscraper and racing car would lend their forms to the decoration of everyday things, as fragments from Greece, Rome, and mediaeval England had in the past. In the twentieth century, when symbolism was gradually to supplant eclecticism, the heart was the sentimental first symbol. Designers liked to take it all very seriously and to believe earnestly in the new warmth and humanity which had entered art since the new century had forsaken the forms of past civilizations.

The use of local symbols in design grew rapidly from federation to about 1906, after which it subsided. During these years the kangaroo and other native fauna and flora appeared frequently in terra-cotta and plaster. "We can go to nature as did the craftsmen of old," wrote George Taylor in a plea for national character in the *Architects' Journal* (Sydney) in 1904. "In the turn of a fern-frond we have a spiral almost rivalling the classic volute of the Ionic capital — we have new shapes in the beautiful curves of the waratah petals, in the great sweep of the Lyre tail . . . " Again, in 1905, the *Australian Decorator and Painter* argued: "Ornament in use is largely based upon plants which are exotic and therefore cannot appeal to Australians so favourably as would ornaments based upon more familiar types." Homely familiarity and a movement back to a rather sterilized sort of nature were seen in quantities of fret and appliqué work. The simple life was suggested in a decorative scheme devised for a magazine article by Blamire Young in 1906. He gave instructions for drawing a duck and for cutting it into a stencil (an instrument of great popularity). Then "the next thing is to apply it intelligently to the wall". Informality was the rule. "Don't measure off equal distances of ducks . . . better to use them in groups. . . . Some may differentiate the ducks and drakes. Others may like a black or tinted duck here and there." It was all simple and wholesome, "not very grand, of course, but it is sound and honest, and may very likely be original."

Originality was indeed the aim. "Bad originality is preferable to good copyism," wrote W. Fulton in 1905. A little of this attitude was translated into planning. The box of separate rooms was opening perceptibly, with sitting-, dining- and living-rooms having a tendency to merge, for the first time, into a single contorted space subdivided by trellised archways.

New colours were sought. With brick walls and terra-cotta tiles, the outside had long been submerged in red. About 1906, some of it leaked through. A smart dining-room had walls decorated in bright red, with a deep red and green *Art Nouveau* frieze. In the face of all this bright informality, "graining" was losing popularity.

"Graining", which consisted of imitating wood or marble grain in paint, had been flourishing since 1850. A plain ground colour was painted on the surface and the grained effect was then applied in a darker tone with fine brushes, combs and other special tools. Usually the practice was confined to wood surfaces, but metal sheets and moulds were sometimes treated in the same way. Herein lay the great advantages of the practice — different woods and materials could be matched. Oak was the favourite subject of the grainers; the complexity of its grain made the job worthwhile. An expert decorator of 1905, F. Ellemore, always advised beginners to secure a good specimen of oak as a model. "Oak", he admitted, "is one of the most difficult subjects, but with practice you should get into a good style." Decorators with sufficient practice could turn a jarrah door into oak of wonderfully convolute grain in a remarkably short time and were paid more for this intriguing work than the simple tradesmen who prepared for them the plain ground.

Yellow-ochre was the favourite base, but browns and even greens were used. The blame for the final eclipse of the practice was laid by the old-school grainers at the door of the young decorators of the World War I period, who used chrome yellow and other vulgar base tints.

"Marbling" was a variation, but subtle ethics were involved here. Whereas it was counted legitimate to imitate a wood finish on a wood base, a "marble" finish on wood or metal was not admitted by the purists.

Graining was used enthusiastically on all parts of the house in the early days, particularly in the southern states. It was less popular in woody Queensland. Later it appeared mainly on doors, although it was also helpful for disguising the fact that skirting 'boards', after 1900, were frequently formed in the plaster of the wall. On doors all the original timber joints at the corners were reproduced in the grained paint, despite the fact that the flat base coat had obliterated them. Flush metal fire-proof doors were lined into panels with changes in the graining where the timber joints would normally appear.

Conscious that some apology was necessary for the falseness of the craft, the more intellectual grainers justified their work on the ground that all building finish was imitation, otherwise plumbing, framing and all the rest of building's seamy side would be left exposed. Godfrey Giles, a Fellow of the Institute of British Decorators, told his fellow members: "The foolish condemnation of marbling and graining that novices and amateurs so frequently have expressed is inexpert and insincere."

This was in the failing years of the practice. *The Australian Decorator,* in December 1915, reluctantly admitted that graining was losing popularity, but, "it had so much to recommend it that there are grounds for hoping that the decline may be only temporary."

Seven months later, even this magazine had given up its hope. Realizing that the battle was lost, it asked angrily: "Is it because the imitator of woods and marbles is only offered a few pence more than the operative house painter? . . . Are we just following the fads and fashions of the times [in preferring natural wood]? What would become of the grainer or decorator if we all believed John Ruskin, who said, 'there is no meaner occupation for the human mind than the imitation of woods and marbles'?" Graining died, for all practical purposes, shortly after this lament, but it would not lie down. Even in the 1950's there are still expert grainers in the decoration trade. About the only opportunities afforded them to keep their hands in are provided by occasional railway carriages, trams, station waggons and other coachwork, and in sporadic display effects for department stores.

Towards the end of the first decade of the twentieth century, home-builders realized two grim truths: not only was their domestic help disappearing, but the cost of building was rising rapidly. The realization brought about a profound readjustment in the approach to planning. The service-rooms now began their infiltration movement on the main block of the house. Labour-saving devices moved from the carnival world of novelty into serious economic competition with the decorations of the house. The long passage became objectionable now that the mistress herself had to shuffle its length behind a broom. Redundant furniture and ornaments gave less pleasure now that it was she who had to dust them. "Scientific" planning was the new term as young architects pointed to the steps saved in a tighter assembly of rooms. Normally the kitchen and dining-rooms were separated by only a narrow passage. About 1909 this barrier was removed and the servery was created. At first it was no more than a hole in the wall with a cover operated from the kitchen side. Then, shortly after 1910, a sideboard was built under the opening on the dining-room side and shelves and a work-bench were fitted around the kitchen opening.

Inventive architects were spending much thought and a little clients' money in trying to find a better solution to the southern Australian window problem. Many were able to satisfy themselves with original devices which they repeated frequently, to the indifference of their contemporaries. Early in the century, Harold Desbrowe Annear, of

Heidelberg, Victoria, started using his vertically sliding sash which trailed a flyscreen from a wall cavity. About 1914, B. J. Waterhouse, in Sydney, used top-hung internally screened sashes which opened like wings from the wall. A little later, Walter Burley Griffin developed, in Melbourne and Sydney, his light wooden casement which could be secured in any position by a thumbscrew on a wooden hinge and a somewhat cheaper model which was merely pivotted on two big nails driven through the frame.

After 1910, the term "modern architecture" was used with slowly growing confidence to describe a new type of building — something more than a new variation of an old type. A few pictures had been seen and stories told of some extraordinary experimental houses in Europe. Few Australians seriously considered this incomprehensible work when they used the word modern, but the image of these stark, square blocks helped to give colour to the word. "Modern" sounded glamorous, provocative. It meant freedom in planning, plus a hint of licence in proportion. But the freedom was largely an illusion. There were very few designers whose work was not still tied to Queen Anne's apron strings. Many, however, were talking of the new movement. Many were profoundly affected by the discovery of Adolf Loos and others, near the end of the nineteenth century, that decoration was not essential to building.

Never before in the history of building had ornament been discredited. Houses, like clothing, had been traditionally vehicles for ornament. European architects now suggested that the elements of the structure, logically expressed in the chosen material, were sufficient for any building. This theory produced in Australian architectural circles a great conflict which lasted until 1939. Laymen, under the impression that they had the wholehearted support of the best artists, ridiculed the designers who advocated architectural nudity. Did not the word "artistic" mean "beautifully decorated"?

Meanwhile, some architects, having rid their minds of the question of ornament, set themselves cautiously to the positive task of creating new patterns in structural form, using eccentrically supported steel, concrete and glass screen-walls as their principal stock in trade. This was even less to the liking of the layman, who saw a comfortably familiar world of curves and carvings in danger of being squashed flat beneath an overbalanced cantilever. Then the forward-looking architects began to realize that the savage urge to decorate would die hard. The amazing discovery of the Functionalists could not be put to practical use for years, for even the most cultivated people had not yet laid aside the primitive desire to ornament their shelters. Even such men as painters, psychologists and sensitive musicians appeared to be afraid of their own houses. They could not face reality in construction. They seemed to be demanding a mask — adornment more refined but no more reasonable than the fierce slashes of colour on a savage warrior's face.

Let them have ornament, cried the Functionalists, if it comes from the heart in the form of a painting or sculpture or a piece of reminiscent driftwood. But not a stock fibrous-plaster cornice, not a wrought-iron grille designed by a draftsman who has never bent a bar of iron, not a machine-run moulded architrave. Let them admire the work of the Greeks and the Goths and the Georgians, but only as museum pieces. Let them keep their family heirlooms and favourite ornaments if they must, but stop them when they ask to keep the wrapping paper as well. Break the habits of ornamentation which decree panels for doors, cornices for walls, bars for windows or slopes for roofs. Disparage the "Man of Taste" who differentiates between plaster moulds, all of which are bad in the light of the new discovery. Condemn the dilettante who criticizes bad proportion or lack of balance, for he is living in a past culture; there can be no bad proportion in the eyes of the gods and this century must find its own balance. Ban the interior decorator.

Some of these theories were being widely disseminated between 1900 and 1910 by Robert Haddon to his students of architecture at the Melbourne Technical College and to any members of the public who cared to read his *Australian Domestic Architecture*: "Each [material] has its own nature," he wrote. "The best qualities of each may be brought out by true craft labour." Something on these lines was to be repeated by every architectural tutor a quarter of a century later, but it was revolutionary in a generation of tuck-pointers. He called for reform in suburban house building. He asked only for the "sound logic" and "lasting reasonableness of naturalistic building. . . . Our work has been all too temporary, too transient, too showy, frothy, unsuitable. . . . " These were the first lessons in the new integrity which came to house design later in the twentieth century.

But it was one thing for architects to learn to omit applied ornament, and quite another thing to re-train their own minds to recognize basic simplicity. The rules of proportion which the Greeks had perfected for stone structure were still the conscious or unconscious basis for judging timber or concrete frame building. At least another half a century had to pass before men – including some architects who knew the theories, and tried – could rid their minds of the conditioning of classical proportions. Even then the term "bad proportions" remained as the greatest artistic condemnation of a building. A narrow high end of a house, for instance, might thus be disparaged by a pundit; which meant that it failed to tally, somewhere in his subconscious, with the image of the portico of a temple built 2,000 years before, 10,000 miles away.

7

Informal Interlude

WITH the exception of a few pair-houses, each new dwelling was now detached and isolated in its own private ground. The gardenless town house, poured into its narrow site as into a mould, had gone with the new century. Those which were left in and around the business hearts of the cities gradually turned into professional offices and tea-rooms.

A daring innovation in cottage planning about 1911 was the side entrance. The sitting-room and master bedroom still shared the street view, but they now stood side by side, with the hall behind the former instead of between the two. A triumvirate of entertainment rooms — hall, dining-room, and sitting-room — now faced a slightly widened side garden. Panelled double doors linked the three rooms.

The first few examples of what was later to be called "Bungalow Style" appeared about 1912. As in England, a single-storey villa of any type was often referred to as a bungalow. This new development, which was to reach its climax in the twenties, was an architectural style which could be and was applied to a building of any number of floors. Unlike the previous architectural changes, it came about in gradual evolution. At first it showed only in a simplification of the ground plan and the roof silhouette of the Queen Anne house. Some builders had the audacity, in an age of tortured roofs, to place a single gable on a rectangular plan, or a simple pyramid on a square. Then came some basic adjustments to the plan. The old narrow entrance hall, penetrating deep into the dim heart of the house, was widened, brightened and used as extra living space. Sometimes it was fitted with a fire-place. A sleeping-out verandah opening off the bedrooms became popular, particularly in attic houses. Attention was being paid to orientation for the first time since suburban development began. South and east were the more favoured aspects.

The most spectacular external change was seen when the roof began to drop. At first the movement was slow, but trade journals hammered down at the ridge. They pointed out the advantages of the sun protection given by a wider eave, which in turn was possible only with a low pitch. Besides, as the *Real Property Annual* of 1914 pointed out, "pretty effects with low-pitched roofs" were not impossible. By now they were referring to the houses which were adopting some or all of these devices as "American Bungalow" or "Californian Bungalow" types. The recent low-slung, woody work of Greene and Greene, Maybeck and other Californians was quoted as the model. The "ingle-nook" about the fireplace appeared, with a little, high, diamond-paned leadlight on either side.

But despite these important developments the general appearance remained unaltered until World War I. The "picturesque" was still the ideal. Such Queen Anne details as the bay-window, the terra-cotta frill on the ridge, the fretwork arches dividing hall and passage and drawing-room and bay, the mirror-panelled mantelpiece and the stained glass *Art Nouveau* high-lights, were intact. So was red as the predominant external colour for walls and roof.

More labour was being saved in the kitchen as the new black cast-iron gas stove began to be imported in quantity. An unwieldy phrase, "hot-water service", came into general parlance. The heater it described was powered by coke or gas. Gas fires were fitted in less important rooms and the number of chimneys began to drop. A commentator foresaw, in an unreliable crystal ball, "the house without chimneys . . . the saving of money and labour makes this change inevitable." Deep mouldings left the skirting, architrave and picture-rail. They were given a simple splay known as a "sanitary mould". As the name implied, the motive behind this simplification was not wholly aesthetic; the elimination of dust pockets was the principal consideration.

Sleep-outs had become a standard feature in the south by 1912. The walls were not plastered and usually a ceiling was omitted. In single-storey houses they were added under an iron or low tile skillion roof at the back. In two-storey houses they often became sleeping-out balconies, welcome additional architectural features in the roofs of the last days of Queen Anne. They nestled between turrets and ridges in the shape of oversize dormer windows. They added one room of draughty accommodation at little extra cost. This was an important consideration, for costs were rising slowly but steadily.

The volume of construction had been growing since 1904. Just before World War I it was greater than at any time since 1888, the apex of the land boom. Banks and building societies were offering up to two-thirds on security. Materials, including the large proportion imported, were still cheap. Australian forests could still supply fine timber in quantity and her land still gave up freely the raw materials for concrete and brickwork. A handy man who could perform his own carpentry and bricklaying could buy the materials for a four-roomed timber house for less than £150. But tradesmen's wages had started a new gradual climb which was to continue till 1929.

The timber house, using more labour than the brick house in proportion to material cost, rose more rapidly in price. An average comfortable six-roomed house in 1912 cost £800 in brick, £550 in weatherboard, and a little less in the new asbestos-cement sheets. Five years earlier the proportion had been about £750 (brick) to £450 (timber). More people now turned to brick.

The "Red Queen" had had a long reign. Gloomy Queen Anne, lately assisted by her arty-crafty consort, *Art Nouveau,* had ruled the suburbs for nearly a quarter of a century. But by 1915 her most devoted subjects seemed to be cooling off. Perhaps it was merely boredom which prompted them to revalue her. Perhaps it was the impact of the war (the first Australian contingent had sailed twelve months before; Anzacs were now on Gallipoli) which made those at home look for greater realism in their art. There was a perceptible back-to-nature movement. In home-building it took the form of superficial preference for "natural" appearances.

Being natural meant being rugged and casual. If two timbers were to meet at right-angles it was better that one should over-shoot the other and project a few inches rather than that the two should be mitred. Gilding and the pastel tints of interior decorators disappeared with graining. Darkest brown and black were back for the first time in seventy years; but the wood was stained thinly, allowing the grain to show. Mantelpieces, the fretwork bridges across halls and over square archways, and the occasional plate-rails which had recently developed in place of picture rails were all covered. (Each picture was now pinned individually in the centre of a wall panel.) Often black panelling on the walls of the entrance hall and living-rooms ran to door height. The wall above and the ceiling were chalk-white, made of one of the new gypsum or composite wall-boards, the joints covered with wide black straps. In 1915, in Sydney, the Institute of Architects sponsored an Ideal Home exhibition, featuring the new style in a model cottage designed by Roscoe J. Collins. The composition board walls were painted white and the gutters were picked out in flat black. Inside, the drawing-room and main bedroom had mock beams stained dark walnut against a white ceiling.

Planning was developing on a similar theme, a little freer and slightly more open. The double doors between sitting- and dining-room were glazed in a wary endeavour to provide an illusion of spaciousness in the small house.

Import restrictions on European timbers turned builders to local hardwoods for joinery and floors. It was a period of grim reality in decoration. A "Liberty" design on wall-paper was offered in 1915. It featured the Union Jack and the Tricolour combined in a repeating pattern. Wood carving, painting and plaster work were not permitted for decoration's sake. They had to carry a message. "Of course," an *Australian Decorator* columnist said contemptuously in 1916, "one can have walls simply distempered in plain colour schemes which do not represent anything, but I should not describe such work as decoration."

Wall-papers fought the growing costs of war-time but could not win. By 1917 they were beaten down to a miserable frieze only a few inches deep clinging desperately to the underside of the picture rail.

Some old effects were being obtained with less trouble by new materials. The laborious technique of lath and plaster was gradually replaced by "monolithic" fibrous plaster sheeting with small stock cornices and square moulds around wall panels. Precast concrete lintels carried brickwork over windows and doors.

At the end of the war, rising costs were reducing the size of the house. Something had to go in the resultant conflict. It was the dining-room. The "common room", a combined living- and dining-room, made its first appearance in better quality houses, but it was not to be accepted generally for another twenty years.

Informality was demanded. It was provided by the side-entrance, which now stepped out of the architect-built class into general popularity. It produced a new problem: how to lead the uninitiated visitor down the garden path, past the projecting front wing, keeping him hopeful and interested without being so attracted as to attempt premature entry at a front window. This was achieved by including a variety of set-backs and windows, including a port-hole, on the walls approaching the door.

The attic remained popular, providing an additional hot room or two at little extra cost in a house which could still be described as brick. The diagonal line was in fashion. Used in planning, it produced corner fire-places and rectangular or octagonal bay windows projecting from the corner of the sitting-room. Heavy costs were also gradually reducing the ceiling height. It dropped from an average twelve feet in 1914 to eleven and sometimes ten in 1918, never to recover.

In the gardens of many bigger houses, in 1915, something new was showing. It was just behind the house and against the fence, a shed made of the same wall and roof materials as the house. Inside, high and excitable, lived the new car. Last year it had been housed in the stable, or had been given a makeshift shelter of weatherboards and iron. From now on its port would become increasingly important as a feature of the house. It would edge nearer, as the kitchen had, until, in the thirties, most houses would incorporate a garage under an extension of the main roof.

The car had the effect of spacing houses a little further apart. Before 1910 suburban builders customarily made as much as possible of the width of the lot by taking the house to within five or six feet of either side fence. Now everyone, with or without a car, began to insist on room for a drive past one side of the building.

Orientation was given more attention. The sun was still deliberately avoided. When the up-to-date planner of 1918 had the choice, he put the living-room windows on the south or east sides. The tall, thick cypress hedge was reduced into a lower, leafy barrier behind a woven wire fence. Yellow privet or blue-grey and odiferous saltbush were trimmed neatly some three feet high. The effect was decorative only; the front garden had lost its privacy from passers-by. Native trees were still destroyed, but more deciduous trees were being planted. Flower-beds were diminishing and buffalo-grass lawns were spreading close to the verandahs and the plainer red-brick walls.

Costs, now at a peak, had almost doubled their pre-war level. An average brick house of 2,000 sq. ft. cost about £1,000 in 1914. By 1921 a similar house cost about £1,800.

Before the war, a Melbourne firm of builders, Dunlop and Hunt, advertised "Queen Anne Villas" for sale. In 1922 their advertisements read: "cosy, up-to-date, and distinctive Australian homes." This description now applied to simplified, rough-cast walls and lead-light windows under high-pitched shingle roofs. C. F. A. Voysey's English country houses of the nineties were the models. A few hundred such cosy, up-to-date cottages were being built for the first section of the new model township of Yallourn in the Victorian brown-coalfield.

Architects no longer ignored the small house. A group of prominent artists and enthusiastic young architects[1] launched an ambitious propaganda magazine, *For Every Man His Home*. The editor, Harold Desbrowe Annear, explained their motives with undiplomatic frankness. "We publish in order that all who wish to own houses may be encouraged to obtain, by the assistance of the modern practising architects, better houses than those now forced upon them by builders . . . In the architect, you have a man of studious thought and invention and in the builder a tradesman . . . of greater or less accuracy and honesty. [The owner] won't get anything approaching a simple, up-to-date building unless he employs and trusts an architect."

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[1] P. Meldrum, Arthur Streeton, Marcus Barlow, R. B. Hamilton, W. A. M. Blackett, Percy Everett, Roy Stevenson, Leighton Irwin, James H. Wardrop.

The architects had been turned towards the small-home field by high post-war costs. Now they were beginning to be fascinated by the problem of making comfort and simple elegance out of cheap materials. They were becoming intrigued with the idea of saving labour for the unassisted housewife. Smallness became an asset in the kitchen for the first time, as cupboards began to line the walls of every architect-built home. The cupboards were custom-built to each kitchen, with thick pine work-tops and draining-boards scrubbed white, and a panel of marble let in for a chopping block. Cupboards at head-height were shallower. The top, at seven feet, sloped back to the wall at an angle of forty-five degrees. The central table disappeared and the room diminished to about two-thirds of its old size in an equivalent house. Annear believed it should never be longer than fourteen feet or wider than eleven feet.

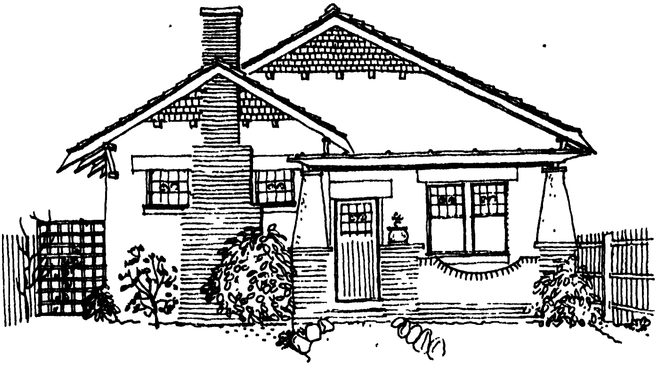
Meanwhile the American Bungalow style rapidly gathered strength. The bookstalls displayed a wide selection of plan collections and home-builders' guides from the U.S.A., each with numerous illustrations of the movement that had now been established there some ten years. Cosy warmth, security, and quaint, roomy, natural charm — these were the aims. "Even in winter this bungalow looks warm," said the captions. "This bungalow is sociable, agreeable — like a friend who is never cold." "The deep shadows invite one to lounge in languid disregard of passing time." The elements with which such elusive character was coaxed were low, widely overhung roofs, lumpy timbers and rubble stone-work, pebbledash and rough-cast, thick pylon supports for deep porches. Inside the house were ingle-nooks, exposed beams, dark-stained panelling and a wonderfully varied selection of built-in book-cases. "A fellow would like to poke around among these shelves and find some rare old volume," wrote one caption writer.

On the voyage across the Pacific some of these elements were lost, but "genuine bungalow feeling", as it was called, was conveyed by many houses in and about the developing suburbs of Glen Iris and Brighton, Melbourne. They were the work of a few builders who religiously transposed the American magazine ideal. The bungalow style appealed to those few builders who studied it, for it spoke in their own terms — the language of the sophisticated bush carpenter. Timber structure was frankly exposed and expressed. Rafters shot far beyond the gutter line to be chopped off square. This effect was also a favourite device of Charles Greenhill, a builder of numerous houses in and about Kew, Victoria, who described it as "Japanese".

Rubble and rough-cast and lapped wood — the glorification of the lazy man's job. In the U.S.A. the roofs had been pitched as low as ten degrees. In most of Australia, where tiles remained the standard roof, they would not safely drop below twenty-five degrees. Various devices disguised this stylistic shortcoming. Porches and other appendages were roofed at fifteen degrees and less, despite the warnings of tile-manufacturers. The low roof of the porch would be contrived as the dominant, projecting beyond its massive supports to form a window-hood across the entire front elevation. The appearance of cosiness was important, but the number of fire-places had dropped to one in the main room. It was placed against the front wall and its chimney became a major feature of the façade, symbolizing warmth within while it released a high portion of the fire's heat into the night air.

The speculative builders of Adelaide, where the corrugated-iron roof was not held in such contempt as it was in other capitals, were happiest of all with Bungalow Style. They used iron at comparatively low pitch, and local stone on the façade (often changing to brick for the sides and back).

Other builders, observing the fashion but not the feeling, selected only those elements which could be applied to the standard asymmetrical-front plan, resurrected from behind Queen Anne. They accepted a low or flat roof for the porch and its thick pylon supports. Some thousands of these pylons were built, in every city and in most materials. The most common form was brick. A square base of 23-inch sides rose some four feet and turned into a circular column, tapering rapidly from a 22-inch base to a neat 12-inch diameter cap. Two or three such columns dependably supported the lightest timber and sheet-iron flat roof. A cheaper variation carried the brick base to within two feet of the porch roof, then filled the gap with a group of two or three square wooden posts. In Queensland the pylons were mocked in weatherboard. The average builder accepted also the simple groups of narrow windows on the street front. But they could not face the change from their favourite double-hung to the casement sash decreed by this style, nor allow themselves the luxury of the rugged look on which the style depended.



Major Steps of Stylism (7)

Californian Bungalow, or simply "Bungalow Style", of the 1920's. It began with a rugged, simple homespun look, with heavy beams and rough textures, but soon became conventionalized. In this period the chimney was moved to the front wall as a feature of the façade. Gables were lower, and massive pylons supported a flat roof to the porch. Cement-tile roofs, shingled gable-ends, clinker-brick chimney, rough-cast walls and green paint were characteristic. A favourite name was "Green Gables".

They could not tolerate rubble and rough-cast and lapped and bolted timber-joints. They rendered and tapered columns in stucco or rough-cast and for the rest left the red brick exposed. Indoors they stained vertically panelled doors in dark brown, but omitted the ingle-nooks, the beams and the bookcases. They were troubled by the new grey and green bushland colour-schemes, so they kept the pots of brown and ivory which had seen them through the last two decades.

Bungalow Style was a builders' importation, seldom adopted by architects. But a certain affinity could be discovered between it and a current architects' style for big houses. B. J. Waterhouse in Sydney, for example, used stucco walls above a rubble-stone base and below a heavy boxed-eave shingle roof.

Many owners of genuine Bungalow Style carried the feeling through to the garden. For the first and only time the small suburban lot often became a tangle of shrubs. Native trees were cultivated, hydrangeas and rhododendrons crowded the building base, rockeries and flagged paths twisted round the edge of the lawn and the formal bed of annuals disappeared. The fence changed radically from the former pickets to wire on wooden rails, sometimes above a rubble base, or to a low brick wall finished to match the house. The fashion of sympathetic garden treatment was received with the greatest enthusiasm in Perth. Native trees and shrubs had always been accepted in this lately developed city; imported deciduous trees were hardly known. Now spare young white gums, handsome red flowering-gums and mauve-flowering, lacy jacarandas grew thickly in front gardens and on wide lawn side-walks.

8

From Jazz to Ultra-modern

EARLY in the 1920's, Jazz Style appeared. On the leadlight liquor cabinet lay a book of cocktail recipes — "Temptation", "Devil's Kick", "High Stepper" — and beneath the glass-tasselled silk shade of a standard lamp stood the new gramophone, dark brown and shiny, with a full stack of fox-trots and one-steps. "Become efficient at home in the Art of Jazzing", advertised Home Recreations Ltd. in Brisbane in 1922, "and attain that measure of confidence so essential to the thorough enjoyment of Jazz parties."

The zig-zag stripe and the skyscraper's set-back silhouette symbolized the jazz age. The zig-zag appeared on wall-paper, curtains, cushions. The skyscraper silhouette was worked into bathroom tiles, living-room cabinets, bookcases, bed-heads and was appliquéd on fabrics. Burnt orange was the colour, with green, yellow and black accents.

Jazz Style was only a decorator's idea; it was not expressed by the plan or even the façade of the new house. Perhaps one room of an old home would be made over in its spirit. A modern housewife might, some rainy afternoon, sew together old lengths of velvet, brocade satin and leather to make a handsome cushion with stepped ends. In new small houses it took the form of conspicuously frivolous details superimposed on the modified, declining Bungalow Style.

Dark brown and ivory-white were still the paint colours on the building, but red brick was featured indoors as well as outside. The red fire-place was arched in a semi-circle from the hearth. Pictures were leaving the walls. A black plate-rail, circling every main room at door-head height, was sparsely set with bowls and stem-necked vases.

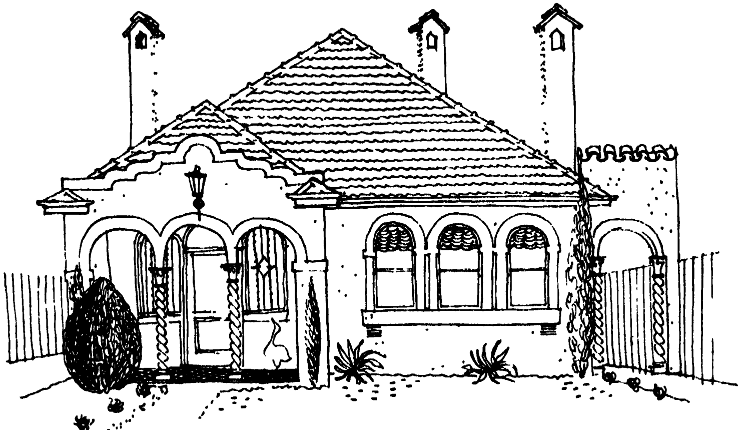
The ebony elephant was well ensconced by late 1927. He stood on the mantelpiece, facing right. Behind him was his slightly smaller mate and behind her the family, gradually decreasing in size, its length roughly proportionate to the master's income. Elephants had other uses in 1927. They made book-ends in ivory and ebony, fabric decorations in paste, handles for cupboards in wood, painted stencils for door panels or bed-ends. In such form they were often surrounded by triangles and overlapping semicircles in different colours.

Jazz Style was not expected to last and, except in wallpapers, carpets and the cheapest furniture, it did not last. Another style of much greater warmth and broader appeal was on the way up.

No decorative fashion of the twentieth century owed as much to one man as did the Spanish Mission to Professor Leslie Wilkinson of the University of Sydney. Apart from the direct influence on his students, there were his houses, charming and obviously comfortable, for all to see. In 1922, a year after he arrived from London, he built his own home in Vaucluse, naming it "Greenway" after the first architect. It faced a long white stucco rectangular wall to the garden. Twelve-pane windows flanked by louvred shutters were evenly spaced across the face. A thick garden wall pierced by three rounded archways ran forward to meet a garage. The thought, the ironwork and the colours — white walls with terra-cotta tiles — were Spanish-Mexican, via U.S.A., in origin.

The best qualities of Wilkinson's work were appreciated by other architects. In the next few years the style developed in the upper-middle class houses of Sydney and Melbourne, and by 1927 growing Canberra had adopted it as an unofficial design. These houses were planned carefully for Australia's hot days. They had wide, sheltered terraces screened by arcades. Sometimes they ran to an open U-plan with a private central court. They had small windows facing the sun and big glass doors opening on the shaded sides. John D. Moore in Sydney, Leighton Irwin in Melbourne, and other architects had built many notable homes on these lines by 1929.

Meanwhile, the public had been noting reservedly the Spanish flavour of the wrought-iron work on the garden gates and lanterns, the Cordova tiles, and the archways. By the time building boomed again after the depression, the builders generally believed that the time was ripe for a Spanish invasion. Then every second new standard villa was coated in yellow stucco and fitted with a wide front porch. Two intermediate columns supported a triple-arch opening; a parapeted top reached above the roof spouting, finishing with several scrolls.



Major Steps of Stylism (8)

Spanish Mission. Perhaps the strongest single influence in twentieth-century stylism: yellow stucco, sometimes with a smeared pisé effect, standard Baroque pre-cast columns, groups of triple arches, Cordova tiles on chimneys and featured walls (on more expensive houses they were used for the main roof), boxed eaves, black wrought-iron window grille, ornate lantern, parapet, and tiled floor to the porch.

The 1929 depression saw the tired, dispirited, last days of a century of period revivals. The architectural mood of this finale was indicated in big houses usually with crude, sometimes fine, Georgian detail. Its fastidiousness was typified in the national war memorial of Victoria, a big neo-Grec shrine. Philip Hudson, the architect, wrote a series of articles for the Architectural Students' Society magazine, *Lines,* exposing some of the stage-secrets of the building, "which embodies many optical refinements and architectural detail based largely on the Parthenon, . . . and other Grecian buildings." Illustrating with reproductions of the beautifully drafted working-drawings by William Lacey, the architect explained the geometric finesse with which the proportions had been devised. Everything had been worked out mathematically. Even the volutes to the capitals of the Ionic columns were backed by a scholarly formula. Period revivals continued for years, but such solemn concern for proportions was never again found in Australian building. Future period styles were mostly done in flippant or entirely mercenary mood. Eclecticism died as a sincere philosophy in 1929.

The interval of the depression, when building almost ceased and tradesmen were on the dole and architects sold neck-ties, was followed by a change almost as notable as the revolution after the 1893 economic collapse. Not only did the Spanish Mission, all swirled cement and barley-sugar columns, sweep the small-house field. Not only did half-timbering return. Not only was there a Georgian Revival, with yellow cement Ionic columns and many-paned windows. At last Functionalism claimed the attention of the small suburban builder.

The movement to base a new aesthetic philosophy on machined forms, as old as the century in Europe, was caught up in a rising building boom. The cities were spreading again, and among the bare new streets of red bricks and tiles a stranger was occasionally noted, hiding itself behind the native trees of its lot. The fact that it had spared the trees would have been sufficient to mark it down as peculiar, but other odd things were evident. For a start, the roof was flat.

The Functionalist manner or "International Style", as it was called with intended disparagement, had arrived. Steel-strip windows, flat roof decks, white stucco or washed brick walls, flush fibrous plaster ceilings, flush doors, opal ball light-fittings — these were the unadorned elements that stopped passing cars and gathered Sunday pedestrians along some new street fences.

But was the house a stranger? Somehow the face was familiar. The frank expression of its plan recalled some of the houses that Walter Burley Griffin had built in Melbourne and Sydney five to ten years before. Its lines of grouped casement windows and flat roof recalled Harold Desbrowe Annear's work of fifteen to twenty years before. Its plain white walls and sudden spots of strong colour recalled Robert Haddon's buildings, a full generation old.

Now there were new names. In 1933, the firm of Mewton and Grounds began practice in Melbourne. In five years it was to create a profound influence on Melbourne suburbs. It was the first architectural practice in Australia to build exclusively and unquestionably in the new mood. By 1938 it had a score of houses and flats in the suburbs and country which were ten years in advance of the average keen young architect's work.

The square, plainer finishes had been seen before, but one important quality removed this work from the company of the past: not only did it lack ornament, it took delight in and made a virtue of its lack of ornament. Mewton and Grounds' small-house work was typified by a rectangular plan, broken perhaps by one glazed projection or by a verandah, covered by a low-pitched parallel gable roof. Minor rooms were lit by casements grouped in two's or three's; the living-dining-room had a wider, higher group of french windows. The brick walls were colour-washed; the timber was painted white. Fifteen years later this was the pattern of the average small architect-built house in nearly every part of Australia.

At this time, details of planning and finish were originated — a galley kitchen plan, open to the living-room, a cupboard ventilator, a ring-shaped door-knocker, a fire-place formula, a bathroom brick grille, an indirect wall light — most of which were in general commercial use in 1950.

Between 1933 and 1935 the new movement, now generally recognized as "Modern", grew steadily but slowly. It was assisted by, among others, Edward F. Billson (Burley Griffin's first Australian pupil), Stuart Calder, Rhys Hopkins, Seabrook and Fildes, Best Overend, in Melbourne; the old established firm of Buchan, Laird & Buchan in Geelong; Sydney Ancher, F. G. Gilling in Sydney; J. H. McConnell in Adelaide. A generation of architectural students was growing up with the movement. They still were not taught much about it at school; they picked it up from the magazines and in private investigation of the new work. At first they were attracted by the novelty. In 1935, at the Victorian Architectural Students' Society Ball, they sang[1]:

There's a bright vermilion door,
With a chromium plated handle;
We create a little scandal
When we build a modern home.
There's a cantilever sun porch,
With a green and yellow awning;
Where we sun-bathe in the morning,
When we build a modern home.
There's some concrete and some steel-work,
But most of all the walls are glass;
But the painter does the real work,
And the rest keep off the grass.
We'll have rubber on the floor,
And a sound-absorbent ceiling;
There's contemporary feeling
In our very modern home.

During the Melbourne centenary celebrations, the Building Industry Congress organized a series of home-planning competitions for an exhibition. The majority of the students and young architects who entered favoured Functionalism, enlivened by a discreet touch of Neo-Jazz ornament. Of the ten prize-winners, only one house did not have a flat roof; every one had a corner window. The unlikely feat of a first prize in every section was achieved by Donald C. Ward. His entry in the major "Perfect Home" section of the competitions showed a two-storey white cement-rendered brick house with a flat concrete roof, steel windows, bleached-wood interior fittings and a bold chevron pattern on the garage doors. Later, it was built several times with amendments.

A trickle of simple furniture was keeping abreast of these architectural developments. The Marcel Breuer steel tube chair was being made in Australia in 1933, four years after its first appearance. The simplicity of its continuous tube, the excitement of its unsupported rear and the glitter of its chromium plate symbolized the new mood. One such chair without back legs was to appear in every modern interior of the next five years.

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[1] Words by Mary Turner Shaw, to the music of a contemporary popular song, "When We Build Our Little Home".

One furniture designer, Frederick Ward, had been making simple wooden pieces since 1927. Now in charge of a growing modern furniture department in Melbourne's Myer Emporium, he was producing a wide range of light, square, satisfying units. He worked almost exclusively in wood, with an infectious enthusiasm for its grains and colours. He discovered the beauty of Australian timbers unknown to furniture making and left them unstained for the first time. He devised details some twenty years in advance of regular design: louvred loud-speaker grilles; slanting, handle-less drawer fronts; cupboard doors in a chequer-board pattern, and so on.

Simplicity made a false appeal to some who were not attracted by it intellectually but who believed it would reduce the costs of building. They soon discovered that the precision required to achieve flush surfaces and fewer angles increased costs. The builder who could cover a gap with a decorative mould saved money and gained an effect on the man who took pains to measure and make accurately so that there would be no gap.

The new school of designers subscribed, as all their forebears had, to Sir Henry Wotton's much quoted statement on the elements of architecture (1624): "Well-building hath three conditions, Commodity, Firmness and Delight." Now they called these conditions "functional, structural and aesthetic satisfaction", but the thought was the same. They differed from Sir Henry and others of the intervening centuries only in that they carried the principle further. They declared that the fulfilment of each of the three must be achieved simultaneously. The Victorians and Edwardians had allowed themselves a leisurely schedule for designing a house. Firstly they satisfied "commodity", stringing the rooms one to another in the order requested by the owner or by their own interpretation of the problem. Next they sought "firmness", building up the walls to thicknesses required by the superstructure, and adjusting roofing timbers to the size required by the plan. Finally, they added "delight", generously and conscientiously, juggling the rooms and roofing elements into some general shape which appealed to them for any academic or personal reason, then applying the whole with borrowed or invented ornament.

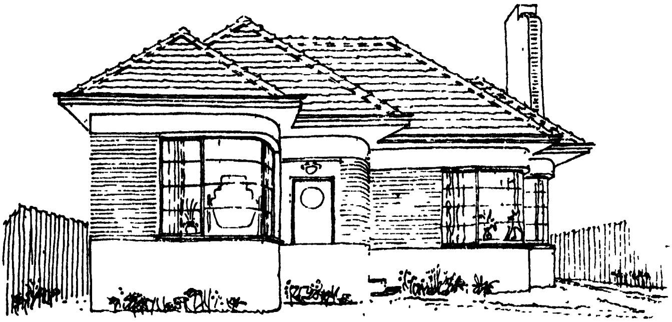
The new movement insisted on the simultaneity of the three solutions. The new architects held that if commodity was juggled to satisfy firmness or delight, commodity had been affronted. And if delight was applied to the face of an already self-sufficient firmness, it was an affront to firmness. Delight, then, had to grow evenly with commodity and firmness. Delight could never be the product of decoration.

From this day on ornament began to wither and drop away from architects' work. But it had always been fixed more firmly on the face of the builder's house, and, wither as it might, it would not drop off. For a century, plain building had been associated with servants' quarters and the cheapest jerry-built workers' cottages. The general public would not accept it until it had been associated for at least ten years with the homes of the wealthy.

The speculative builder, heedless of the movement, continued to pick over period styles for another five years, like a dog worrying at something stuck to the pavement, deaf to the oncoming traffic. The lesson of simplicity in the new school of architecture passed over his head, but he found in some of the motifs and methods a new source of decoration. A small but steadily increasing number of common houses "went modern", with a new superficial style applied to traditional planning and structural techniques.

In commercial and public building fields, in the early thirties, the terms Modernistic and Futuristic came to be applied to the high proportion of buildings which adopted an advanced form of jazz decoration. Curved streamlined effects were embodied in the skyscraper silhouette of the late twenties, producing a series of rounded steps known as a waterfall. This effect was sometimes translated into the plan. Every corner of a house visible from the street was curved on a two-feet radius. Horizontality was introduced, emphasized with groups of parallel lines and usually contrasted somewhere by a vertical dominant. Decorative panels were carved or moulded in low relief with various simple geometric shapes. One favourite pattern showed a quarter of a circle in one corner of a square panel; rays and concentric rings radiated to fill the whole panel. This no doubt was related to the growing role of radio in the home. Straight-fluted faience columns without base or capital supported thick, stepped canopies.

Such decorative devices as these were applied to bigger buildings of classical proportions and symmetrical classical conception. They had the publicity value of modernism.



Major Steps of Stylism (9)

Waterfall Front. **The more pretentious house of the World War II period was given rounded corners—a streamlined effect. Horizontality was stressed in the glazing bars and alternate strips of brick and stucco. Steel casement windows, curved glass, cream stucco with dark brick band, boxed flush eaves, flush door with port-hole, Saturn-shaped light-fitting, cream paint.**

Some of these devices, and some of the manufactured products previously confined to commercial buildings, were borrowed by the domestic trade. Chromium-plated steel, moulded faience, rubber floors, glass bricks and various composite materials were introduced to the home. Steel-framed windows rapidly overwhelmed timber in popularity. At first they had divisional bars cutting the glass into the proportion of the Georgian twelve-pane sash. The vertical members were later omitted and the frame took on the horizontal expression which fashion demanded. Narrow opening sashes often flanked a central "landscape" window, a single fixed pane. This arrangement had been introduced by Chicago office-builders half a century earlier. The gable disappeared from the builder's house. The tiled roof was invariably hipped and eaves were boxed horizontally. The eaves-gutter would be hidden within a square wooden box. A stepped parapet was frequently carried around the front porch or the projecting front room; the gutter and the lower part of the tiled roof were hidden behind. The porch column slimmed to a three-inch pipe.

Indoors, stock fibrous plaster cornices grew grossly heavy in the front rooms, mimicking the curved and stepped jazz effects of the city façade. The central ceiling rosette returned in Jazz Style. The few remaining pictures left the walls. Sand-blasting on plate glass and mirrors restored pictorial interest with conventionalized sailing ships and skyscraper sunsets. The number three became the key to decorative smartness. A waterfall effect had three steps. Parallel lines went in threes. A flag-pole would be fixed to the wall with three horizontal bands. Three steps on either end of the parapet would lead to a central feature of three vertical lines. The pipe column of the porch would be threaded near the top with three spaced discs, edged in vermilion. The port-hole window was resurrected from the *Art Nouveau* period, and was tripled. Three large port-holes arranged horizontally lit the hall; three small port-holes arranged vertically pierced the front door.

The fish, a conventionalized flathead, was a favoured character in bathroom floors and sandblasted shower-screens, a line of bubbles rising in precise formation from its mouth.

Triplication and the fish were probably entirely frivolous inventions of the stylists, but most of the other motifs of this phase were clearly and directly derived from the Functionalists. The square boxed-eave and the parapet gave something of the effect of a flat roof, a mark of Functionalism. The exclusively geometric shapes, the sudden abhorrence of a line which might have been drawn without the aid of ruler or compass — this was a more-or-less conscious expression of the age of machine production, the belated end of handicrafts. Horizontal exaggeration was a mumbled reply to the call to buildings to free themselves from vertical, gravitational structural laws. It emphasized the wide sweep of window which characterized the new assault on solid walling. It was also an inevitable fashion reaction from the Modern Gothic vertical of pre-depression city building.

Furniture was following the same directions. It was hard and shiny, heavy with veneers and chromium-plated fittings. The main front room had a Genoa velvet or tapestry suite of square, tailored lines. Panels of shiny veneer were applied to the front of the arms. The same veneer carried through stepped bookcases and coffee tables. Side tables had immense square or cylindrical supports wrapped in veneer. The dining-table had two veneered pylons in place of four legs. The edge of every table or shelf was built up to appear three or four times its actual thickness and was trimmed with short-grained veneer. Queensland walnut was the favourite wood. Curtains were in cottage-weave fabrics, multi-striped horizontally, in response to "the Swedish influence". Accessories also favoured the shiny, machined look. Black glass, silvered glass and plated metal made up smokers' stands and auto-trays. The wall to wall Wilton carpet in a geometric pattern or a plain colour became essential in the living-room, hall and dining-room — now invariably linked by wide plate-glass double doors.

Other minor changes had occurred in the plan. The separate shower cubicle came to be demanded in the smallest house, for most Australians, except the very young and the old, were neglecting the bath. They stood each morning soaking under a high pressure shower, heated by the now universal hot-water service.

The external parapet effect was occasionally a genuine balustrade to a flat roof. The storey-and-a-half house replaced the attic-house in the intermediate class. It was based on a small tiled-roof, two-storey rectangular block. One room and perhaps the garage would project from the ground floor under a parapeted flat roof.

Garages now became standard additions to all but the poorest houses, but there were still not enough cars in Australia to fill them. In poorer districts two out of three garages held nothing but children's toys and the gardening equipment. Before the automobile age such things had been crowded into a small wooden shed at the rear. The American car-port, a doorless shelter, was very seldom used by a nation which paid a lot for its cars and valued them highly.

Gardens lost the shrubby profusion they had enjoyed with Bungalow Style. Rambling paths and curved flower beds straightened out and were trimmed with border plants. The hedge behind the fence went, and with it, all pretence that the front garden was a living space. It was now frankly an exhibition piece. The bed of annuals which replaced the hedge was called the "display border". The narrow bed of grass outside the fence had long been called the "nature strip". This external lawn, this mockery of a communal garden, was the mark of the "garden suburb", the white-collar area. It demonstrated that the planners had been generous in the allocation of public space. Running between footpath and roadway, it ranged from three to eight feet in width. Sometimes, as well as grass, these strips carried trees which were regularly lopped into stunted knots of foliage by the municipal councils. The municipalities owned the nature strips, but they were tended by the inhabitants of the houses, each trimming the section opposite his frontage just as carefully or carelessly as he did his own front lawn.

In Perth, the reduction of the barrier between garden and street was carried one significant step further; often, in the inner suburbs, all front fencing was removed. Some municipal councils in eastern cities (for example, Camberwell, Victoria) attempted about this time to persuade their citizens to eliminate front fences in the interests of general appearance, but without success. Fenceless footpaths were hardly known outside Perth, but here neighbouring private gardens and public side-walk often merged in one sweep of lawn and shrubs. Something of the air of a community park was achieved. The meanness, the competitive jealousy which was the mark of eastern suburbia was almost totally eliminated in the one simple act of removing the fences. Perth's inner suburban citizens were apparently the first in Australia prepared to share a little of their private property in the public, as well as their own, interest.

The only private space for outdoor living was now behind the house, so the back-yard was laid out with greater attention to appearance. A wide lawn extended from the house, lined by flower beds and broken by fruit trees, usually including at least one lemon tree. Vegetable beds in parallel rows were tucked into a rear corner.

Many of the motives of plan and decoration current in the 1930's were common to all the adopted styles. Spanish Mission and Georgian and Tudor might all have flat roofs over one section and sandblasted sailing-boats in the hall mirror. The even chronology of styles through earlier Australian history now became confused as the inarticulate thirties struggled to find a voice with a vocabulary consisting almost entirely of adjectives.

9

The Sun and Five Rooms

IMPERCEPTIBLY, during the late twenties and early thirties, a change of heart came to the southern Australian house. The accent moved to warmth.

From earliest days and throughout the nineteenth century the unquestioned aim of every house had been to fight the un-English qualities of Australian climate. The sun was shunned. The north side was occupied by servants' quarters and service rooms. Dark louvred shutters, closed for most of the year, and verandahs, window-hoods and heavily lined curtains, put up a formidable barrier to bright light. Thick walls kept the interiors cool for at least the first days of a hot spell. About 1900 the windows had started growing. Architects such as Walter Butler had advocated sunny rooms for Melbourne's winter. But even in the most advanced houses the accent was on shade. The strength of the Bungalow Style and the best Spanish Mission was measured by the depth of their shadows.

Now the mood had turned. Some people said that the weather was changing. The southern winter seemed to be growing into the spring; certainly this summer seemed milder than last. Young people shuddered when they visited a Boom Style house in winter, biting cold now that there was no general servant to keep a fire crackling in every room. And they shivered again in the 1920 house, which had reduced the number of fire-places without increasing the windows. Gradually, in Melbourne, the 1930's turned to the north. Unshaded, fixed plate-glass windows brought the sun deep into the rooms. Bedrooms were sited on the north or east. The sunroom, a small glass room off the living-room or dining-room and, in two-storey houses, the "sun-deck" on the garage roof, entered from the main bedroom, were new additions to the plan. Sydney, under a warmer sky, laughed indulgently for a year or two, but by 1939 most states had accepted the principle of shaded northern light. During the war housing columnists made copy of the phrase "solar planning" and by 1950 there was hardly a home-builder in coastal Australia who would not demand a big north window and a wide eave for his principal rooms. When old houses were remodelled, the first step would be to cut away the verandah to let in the sun.

Fire-places were not considered essential in the brighter, warmer secondary rooms. One by one they had been dropping out since 1900. Often, after 1934, only the "lounge-room", as the main room was being called, was provided with a fire-place.

The big bay window, round or square, and the wide window increased in popularity. Traditional window fittings did not lend themselves to the new horizontal shape. At first only the casement sash could be well adapted, for it could be repeated in a series of narrow units divided by only the lightest of mullions. But the casement had two serious disadvantages: it was difficult to flyscreen and its operation, by means of a bar which locked it in a number of positions, was awkward. Manufacturers noted these shortcomings and a flow of new window operating devices began. The double-hung sash was now counter-balanced by a thin, concealed spiral spring fixed to a light mullion, outmoding the old cords and fat counterweight box. Casement windows were hung on friction stays which held them in any position, and were fitted with internal flyscreens. Just before World War II, an adjustable glass louvre, made in Brisbane for tropical use, was introduced to the south. By 1950 it had replaced conventional sashes at least in service rooms in a great number of low-cost houses in Victoria.

Electric lighting was being considered for its decorative potentialities in 1934. The ceiling pendant lost its fabric shade or glass bowl and chain supports. It hung on a rigid, plated rod. Wall brackets of shaded, tinted glass were fixed on each side of the mantelpiece. The indirect light, concealed in a metal or china shade, threw light on to the ceiling. This was invariably painted pale cream, for the cream and green paint colour scheme had burst into popularity. Light green, and apricot and other "autumnal tints" were the predominant colours in carpets, rugs and fabrics. After a few years, cherry red or blue were occasionally used with cream instead of green in the kitchen, but green remained the favourite second colour outdoors. Paint manufacturers offered a "permanent green" but guaranteed no other external tint.

Modern architecture was inevitably linked with modern art in the public mind. The 1920's Jazz Style zig-zag and skyscraper patterns were associated with architecture, but in fact they seldom appeared on a building. They merely dressed the accessories. They had been taken from some contemporary painters by the furniture manufacturer, the wall-paper printer and the shop-window decorator. Later the "free" shapes of the abstract painter were similarly embodied in decorative asides to the main building drama.

Even at the start of the century, modern architecture could find common ground with painting only in the floating planes and solid geometry of cubism.[1] The wilder movements of abstraction, dadaism, surrealism and so on, could hardly have been more remote from the principle of Functionalism. Architecture had sown its wild oats in the extravagant late Victorian days, when painting was chained to realism. Building was driving back to rational forms, to nature, to respect for the human frame, just when painters and sculptors were fighting free from such restrictions.

Conservative artists and the general public nevertheless bracketed the plain building with the abstract painting. Thus they tended to ascribe to the modern architect the loose morals, irresponsibility and degeneracy which they habitually associated with unconventional art, while all the time the modern building was developing into an embodiment of cleanliness and social grace. It should have been quite impossible to picture even mild debauchery in a brilliant interior behind a sliding glass wall.

"Built-in" was the new catch-phrase of 1933. The bath, for years essentially a piece of mobile furniture on claw feet anchored only by its waste pipe, was now set against the wall and bricked up to its lip on the exposed sides. Sometimes it was lowered a foot into the floor as a "sunken bath". The basin, for years bracketed from the wall with its waste trap exposed, was now provided with a pedestal which concealed the trap and gave the whole a more permanent air. The electric clock was built-in to the chimney breast. Purposeful kinks in bedroom walls formed pockets which were fitted with shelves, rails and doors, forming wardrobes flush with the wall. The various kitchen fittings showed a first tendency to grow more akin. Architects dreamed of the kitchen as a machine for cooking in, with every piece of equipment a standard height, depth and colour, arranged in gleaming, continuous rows. To this end they had the cupboards made in precise bands, but the line still collapsed at most of the standard manufactured items. Although the gas company could offer well over a hundred different models of stove, nearly all had long legs and side projections which made building-in impossible. The builders were still placing the gas stoves, and the few electric stoves that were appearing, in tiled brick recesses such as had been necessary for the fire stove. In another part of the kitchen they were building-in the sink, stainless steel now, with a cupboard below. They left it to the owner to provide most of the crockery and food storage space in a standard kitchen dresser, usually with lead-light doors, bought with a table, four chairs and a square of linoleum as a complete "kitchen setting".

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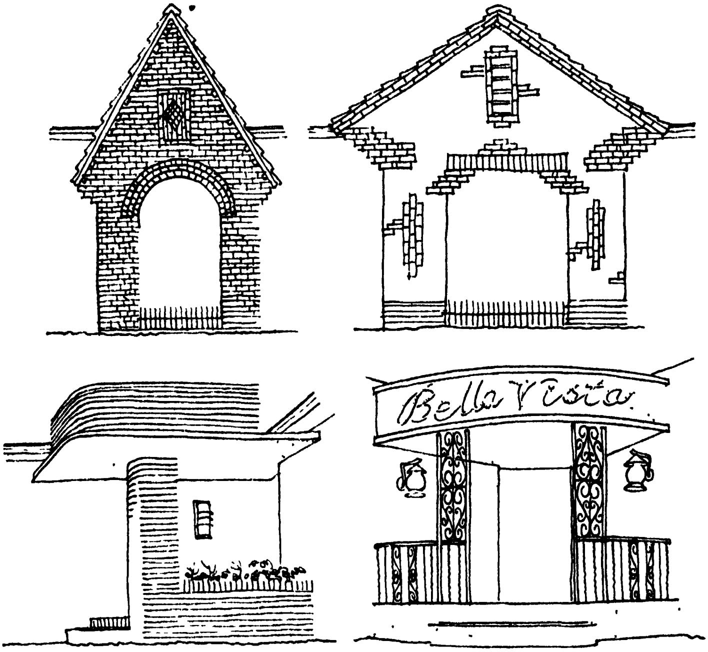
[1] For the most comprehensive account of this relationship, see S. Giedion, *Space, Time and Architecture* (Harvard, 1949), part vi.

By 1939 the dresser was losing popularity and after World War II it had all but disappeared. The furniture manufacturers who made the kitchen settings had by this time accepted the built-in approach and were making modular unit cupboards which could be screwed to the wall in a continuous run.

All mechanical equipment design followed a similar cycle. First the invention was made in the image of the thing it was replacing – thus the first gas stoves in black cast-iron were on the model of the fire stoves, and later the first electric cookers were on the model of the gas. Then each new device smartened itself and developed its own personality. The black gas stove acquired nickel-plated parts, then some castings were enamelled. By 1939 the stove was entirely enamelled and available in a wide choice of colours, none more popular than cream and green. At the same time, the mechanics were perfected, and a few expensive models were elaborated with thermostatic control, clock control, automatic pilot-light starting, and other features which were to



Major Media of Stylism (a)

The Entrance Porch, **being the most prominent exterior feature and having the lightest functional anchor, was tossed continuously by fashion. After 1935, an estate agent might have described a house with either of the upper two porches as "modern", with either of the lower as "ultra modern".** ***(Top left)*** **Clinker brick.** ***(Top right)*** **Ochre stucco and brown and cream tapestry (machine-textured) bricks.** ***(Bottom left)*** **Manganese (dark-brown gloss) bricks and cream stucco.** ***(Bottom right)*** **White stucco and dark-green wrought-iron.**

be lost again temporarily in the post-war return to primitive essentials.

While an item of equipment remained a novelty or a luxury, manufacturers developed its individuality and owners were proud to have it an obvious feature of their kitchen. Thus, while gas and electric stoves grew into flush sheet-metal boxes by the 1950's, the refrigerator and the washing machine, still expensive and a mark of success, retained aggressively arched tops and bulging sides which made them difficult to build-in or to overlook.

Since 1910 Australia had been gradually drawing nearer her goal of a nation of five-roomed-house dwellers. One early move had been to break up the big old mansions. In the nineties Victoria alone had over 1,200 houses with twenty or more rooms. By 1911 there were only 862 such houses in all Australia. By 1921 over three hundred of these had been broken into flats or turned into hospitals or tenements. Few new buildings were appearing in this class. The total in 1921 was only 569. By 1933 it had dropped to 515.

In 1911 the proportion of private houses to institutions, i.e., hotels, boarding houses and other public dwellings, was 30 to 1. The 1921 census showed a temporary increase in institutions — 23 houses to 1; 1933 showed the first sudden rise in houses — 40 to 1; the 1947 census confirmed the movement — there were now 55 private houses to every public dwelling.

In 1933, one-family houses of four, five or six rooms represented about 72 per cent of the total. In 1947 they represented 82 per cent, and five-roomed houses made up more than one-third of the total. In metropolitan areas, 74 per cent of dwellings were detached houses.[2]

One-room cottages and comparative mansions with nine or more rooms each represented only one per cent of the total in 1947. The average number of rooms per house varied slightly from state to state. In Victoria it was 5·22, in New

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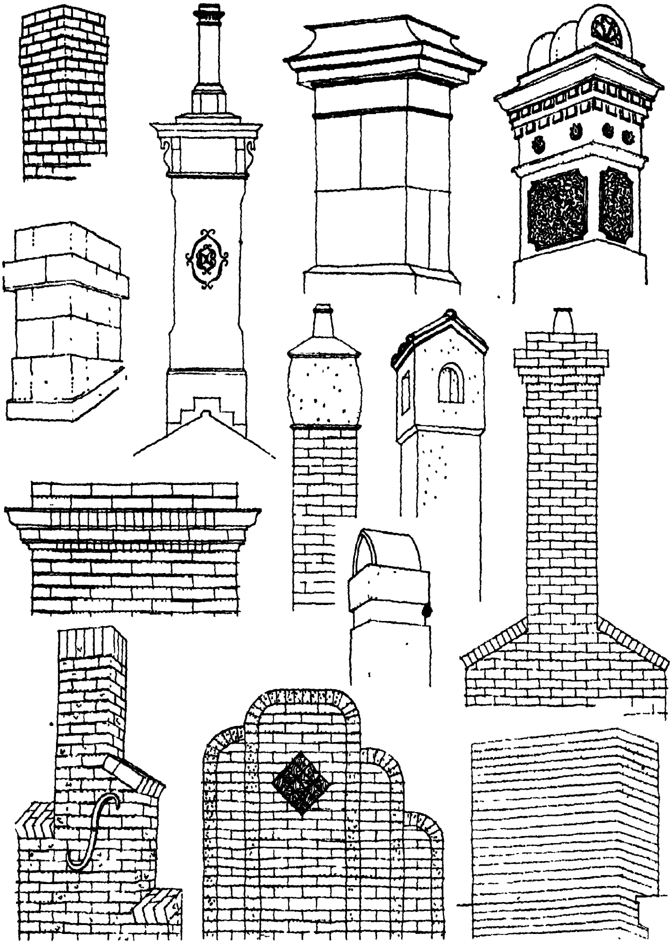
[2] By comparison, U.S.A., another country which was proud of its home-consciousness, had in 1940 only 63 per cent of family detached dwellings. Only 44·8 per cent of urban dwellings were detached.



Major Media of Stylism (b)

The Chimney. The flue, usually 9" by 9" in section, was surrounded by bricks in many shapes. *(From top left)* The basic stack in brick or stone, with only a projecting course or two near the top, was common to poor and rich colonial houses until *c.* 1840. Stucco variations followed; ornamental Gothic, Italianate, Boom Style. *(Centre)* Special fancy bricks and terra-cotta caps were used through Queen Anne, Bungalow and Spanish Mission Styles in the twentieth century. *(Bottom)* Old English, with false tie-rod effect (1935); Waterfall, with special coloured bricks inset (1939-48); and the monumental block of brickwork which was favoured by many young architects (1934-48) and was later taken into the vernacular.

South Wales it was 5·07, but over all Australia exactly five rooms was the average size.

Economy in the depression forced many families to move up to the front rooms and vacate a make-shift suite at the back. A bathroom and a kitchenette of sorts were added, sometimes with municipal approval, often with a few pipes and cupboards knocked up by a handy-man. These new secondary dwellings were termed flats, and received the same official recognition as any of the elaborately equipped apartments in the few luxury blocks. In 1933 separate dwellings in this class numbered 75,152 across the continent.

The proportion of houses constructed of brick had been growing steadily since late in the nineteenth century. The 1933 census showed that nearly three in every ten houses were now brick, about a twenty per cent increase since 1900. Timber now outnumbered brick by little more than two to one. Stone houses had passed their peak – 79,983 at the 1921 census – and were now being demolished faster than they were built. Adobe and pisé, wattle and dab, bark, bushes and rushes were also slowly passing away. In most parts houses so constructed were fewer than at any time since the gold-rush. But the depression had the effect of boosting the cheapest rectilinear wall structure – galvanized iron.

In 1934 a comfortable medium-sized weatherboard house cost some £700. Asbestos-cement siding was favoured in outer suburbs and in the country as a means of cutting this price by about £50. A brick house cost between 1s. 3d. and 1s. 6d. per cubic foot: about £1,000 for five small rooms. The semi-detached pair of houses grew popular with speculators, for it reduced building costs per unit. But now its nature was often disguised. The appearance of a single house was achieved by hiding the party wall beneath the tiles of the roof and varying the plans of the units to form an asymmetrical whole.

10

Return to Austerity

In the early thirties, European Functionalism met with an unexpected reverse — the Australian public and even some architects took for granted that it was American in origin. For many years now nearly every innovation in the lighter arts and industries had had an American accent. Staunch Empire-minded young men spoke against these un-British influences. Most Australians were still silently resentful, if respectful, of anything from the U.S.A. A popular subject for debating societies was, "Is Australia becoming Americanized?" The negative team would point out that many of the new ideas being adopted had come from England, failing to note that many English ideas of the time had been in turn taken from the U.S.A. The belief that the new architectural ideas were coming from America persisted until 1950, by which time it was often true. But even the most mesmerized imitations of Hollywood never surrendered the front hall to the American plan of a living-room entrance.

In the early 1920's many municipal councils in Sydney and Melbourne began to ordain Brick Areas, insurance companies noting with satisfaction that no timber houses were approved in such areas. By 1939 many suburbs were entirely given over to brick. Perth and Adelaide were using brick or stone only. Before this there had been a natural economic segregation of the two principal structural methods. Weatherboards never appeared in rich streets, bricks seldom in poor streets. The brick areas were created for snobbish reasons just when the young modern movement was trying to explain that all materials were potentially beautiful, only man who used them wrongly being vile.

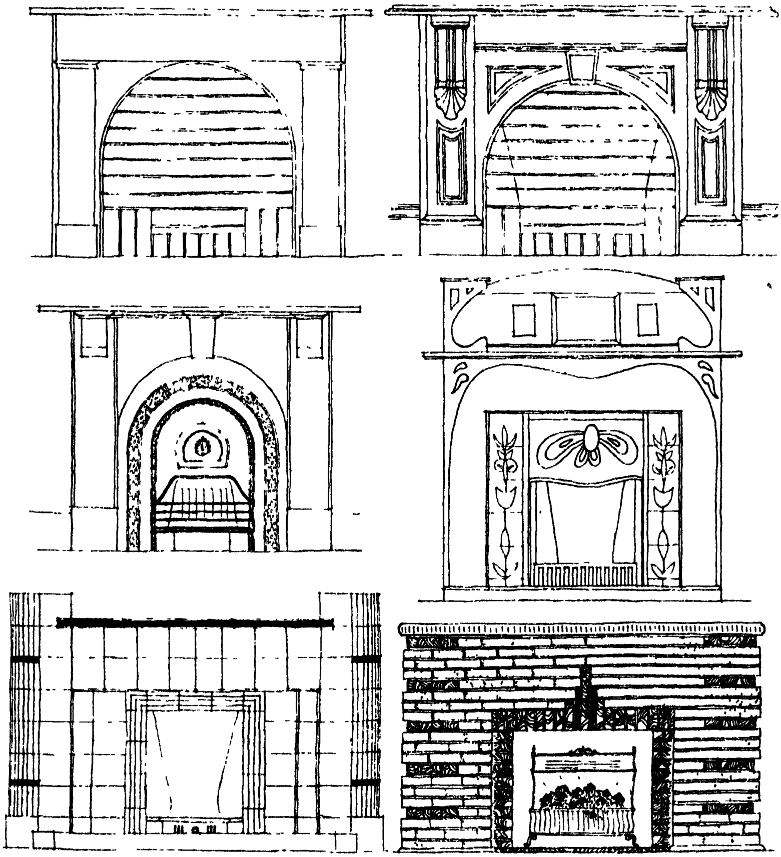
As World War II drew nearer, the bar-room atmosphere grew more intense. Decoration was brittle and shiny. Chromium, glass bricks, glazed tiles and flush plaster were the materials of modernism. Furniture stores were crowded with brown veneers embellished with chromium, and Genoa velvet embellished with brown veneers. Every window within reach of a corner ran to it and turned it, sometimes in a slow curve of expensive glass. When isolated in a room without an external corner the "Chicago" window with its fixed central "landscape" pane was now standard.

Plain red brick was seldom used for face work. Cream, salmon, or brown plain bricks, or striped and textured "tapestry" bricks, covered the outside of the average house and at least the street façade of poorer homes.

The half-timber effect, never dead for long, was revived in Melbourne in 1935 when shopkeepers of fashionable Toorak Village rebuilt or remodelled their buildings, one by one, in a disturbed image of the sixteenth century. The effect appealed greatly to builders, for it could be achieved simply and inexpensively by nailing thin boards to the face of second quality brick walls. The theme was half-heartedly carried indoors, extending perhaps to a mock beam between living-room and dining-room or over a fire-place.

During the war, domestic building virtually ceased. In 1945, Australia found herself with a housing shortage estimated by various authorities to be in the neighbourhood of 400,000 units. In the following years the building industry, diverted to housing at the expense of new public buildings and industrial construction, achieved a record peak of house production. But still the number built every year was not overtaking the demand due to natural population increase and immigration. By 1950, many thousands still lived in unsatisfactory accommodation: in temporary, converted army camps, in tents, in caravans, and with in-laws. Those who contemplated building found costs rising at a rate close to ten per cent per year. The average brick five-roomed cottage cost about £1,200 in 1939. In 1945 it cost £1,700. In 1950 it cost £2,500. In 1951 it cost over £3,000.

Other commodities had risen in cost since the war. Wages also had increased, but nothing grew as quickly as housing costs. Before the war most men in the lower income groups expected to pay for their house a sum equal to two or three times their annual income. In 1945 they discovered that they had to pay about four times their annual income for an equivalent house. By 1950 they were reconciled to paying up to five times their income for an inferior product. For, faced with such rises, the plans for the common house had to change. In 1945 it had been intended to carry on as building had finished in 1939; but almost immediately every effort



Major Media of Stylism (c)

The Fire-place. This hole in the living-room wall set the stylistic note of the interior in every generation. Among the many decorative changes were *(top)* wooden Primitive Georgian and marble Italianate. *(Centre)* The cast-iron grate period (*c.* 1880-1915) and the fretwork and coloured tiles of *Art Nouveau*. *(Bottom)* The prefabricated tiled surround and fire-brick grate, and the custom-built tapestry brickwork of *c.* 1950. The open fire-place of the early nineteenth century returned after 1934, but an imitation coal electric fire was often set on the hearth.

had to be exerted to reduce costs. The proportion of timber houses increased. In Victoria, brick-veneer almost replaced brick. Pisé and adobe returned. Concrete blocks, cement tiles and various substitute boardings were adopted. The small house became smaller. Public interest grew in the jig-saw puzzle aspects of planning. Ingenious new arrangements of rooms reduced the circulation space to the shortest possible internal passage. The traditional five rooms were now invariably four and a half, for the dining-table had become permanently settled in a small alcove of the living-room. Most meals were taken in a tight little "nook" with built-in table and benches in the kitchen. The bathroom had contracted, and if most buildings regulations had not insisted on a bath, a shower compartment undoubtedly would have replaced it in most small dwellings. The average house had occupied some 1,500 sq. ft. of ground in 1939. Now it often took less than 1,000.

Raw and manufactured materials, skilled and unskilled labour, were all scarce. A house which had taken four months to build in 1939 now took eight to twelve months of good fortune, up to two years of bad. Black markets offered materials and labour at double the government-approved rates. Dozens of opportunists with little or no knowledge of the building industry set themselves up as contractors and hundreds of home-seekers came to their doors. The "builders" demanded a deposit before starting work, then often disappeared when their first feeble efforts to buy materials failed. The practice of contracting at a fixed sum was dying out. The term "cost-plus" described a system where the builder estimated a figure on the basis of the plans, but charged the owner the actual cost, which might have no relation to the estimate, plus a profit. Disillusioned, frustrated at every turn, hundreds of people turned to the task of building for themselves. Books and correspondence courses and exhibitions taught amateurs how to do it. By 1951, it was estimated that one in every three new houses was being built by its owner. Most financial institutions accepted the practice, most builders' organizations condemned it. Generally, these houses were well made and finished. The suburban Australian had always been a good handy-man, taking pleasure in small carpentry and repair work around his house. Often he would tackle major jobs such as repainting or building a garage, methodically and patiently, in week-ends and holidays. From now on the labour shortage forced more men, whether they could afford to pay a tradesman or not, to do more jobs for themselves.

Confronted with this situation, the common house dropped some of its flippancy. Material shortages and economy ruled every detail. Gradually the curves and redundant projections fell away. The plaster moulds drew in; the cornice became three small right-angle steps. Special cream or brown bricks became rarer; the common reds returned.

Every conceivable style had been represented on the street front of the standard asymmetrical villa. Now it was wiped clean. All that was left were unevenly-burnt bricks, standard horizontally-lined windows, a hipped cement-tile roof. The traditional plan and structure remained unaltered, but one by one the decorations and embellishments went. A square concrete cantilevered slab nestled in the corner over the entrance door; the porch was gone. There was only one fireplace and one chimney. All was square, straight, unpretentious. Within the traditional shape, the ultimate in austerity had been reached.

The negative approach was maintained in a garden without trees, with straight and narrow flower beds and clipped shrubs. The square lawn and the nature strip could now be trimmed with less exertion than ever by an electric mower.

Few details of this post-war house could be faulted on grounds of practicability. There was little or nothing that could have offended the cultivated tastes of the time on grounds of exaggeration or over-adornment. There was no fault to this house, except the clumsiness and ineptitude of the entire conception. The small house at last had reached the blind end of the road.

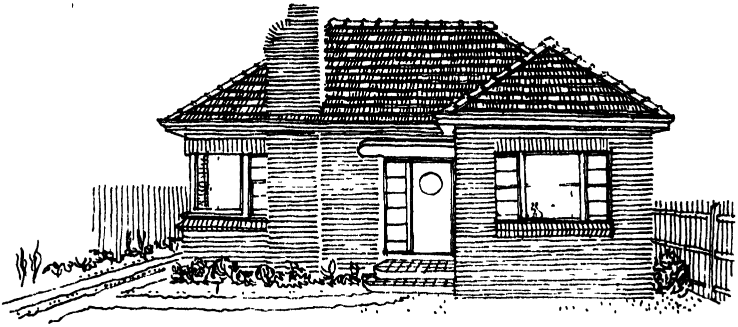
The cities started to spread again, out into the open paddocks and farmlands near the transport lines. Service mains, held up by shortages of pipes, equipment and labour, could not keep pace. Land values mounted along the existing sewerage, water and gas mains, and drained away from the barren spaces between. In Melbourne in 1949 there were 22,000 vacant building lots equipped with roads and all service mains, but their prices were too high for the great majority of prospective home-builders. It was estimated that more than half the new houses being built in outer suburbs would be without water, electricity, sewerage, gas or telephone services, without roads, footpaths or drainage for many years.

As if they were driven by some masochistic desire to accentuate the austerity of the buildings, owners collaborated with builders, gardeners and painters in the removal of softer colours from the new estates. After the native trees were chopped down, even green paint — which had been associated with cream for nearly fifteen years in apparently unbreakable union — now disappeared. Outside, only the pale, pessimistic cream remained. Stark hillsides were spotted with pale weatherboard and raw brick boxes. Between them, confining each in a small muddy rectangle, ran the straight grey lines of tall paling fences.

The simplicity of this work was akin to the simplicity of the farm-building and the out-house. It was encouraged by the creed of Functionalism, but its impulse was largely economic. The builder was still antagonistic to the intellectual simplicity of the Functionalist. When economy did not rule a situation he reverted to sly little means of "relieving the plainness", as he would say. Thus, he still liked to add a few rectangular set-backs and an occasional line of contrasting colour to the tiles on the bathroom wall, or introduce a course or two of "special bricks" around the fire-place and on the external chimney.

In manufactured goods, the standard quality lines were plain, but the special quality lines were still given some geometric enrichment. The architect who spent extra pounds of his client's money in achieving simplicity of finish in the structure often had to accept inferior fittings and equipment, for frequently only these had the matter-of-fact formation which suited his structure.

But the building recess of World War II also had the effect of strengthening greatly the movement towards logical structure and free planning which had begun in the early thirties. The recess had given people a long opportunity to think around the problem of their future home, and the more they thought, the more problems they found. After the war, more people in lower income groups seemed to consider that the services of an architect would be a good investment. At the same time, the younger architects had swung round almost to a man to the train of thought which had produced the simple little houses of the 1934 revolution.



Major Steps of Stylism (10)

Post-World War II Austerity. As a result of rising costs, *c.* 1950, the exterior of the house lost its flippancy. Material shortages and economy ruled every detail. Windows were standard timber or steel; the porch reduced to a small cantilevered hood above the door; plain red bricks, cement tiles, cream-painted trims, glazed-tile porch. There was little pretentiousness or exaggeration. The traditional house shape had reached the end of the road.

Their buildings now were planned invariably on a lineal stretch of rooms. L-shape, U-shape, T-shape and single-line plans had wings one room in width connected where necessary by glazed passages running on external walls. The living-rooms and dining-rooms were united. The kitchen was separated from the dining space by a serving counter. Usually a sliding or folding screen above the counter could be closed to cut off the kitchen, but sometimes the low counter was the only division. Two or three high stools were provided on the dining side for rushed breakfasts at the bar.

Externally, brickwork was often rubbed down with a bag as it was built and later painted a light colour. Inside, architects sought texture for the first time. No longer was every wall and ceiling inevitably coated or sheeted with flush hard plaster. Sometimes internal brick walls were bagged and painted. Lining boards with V-joints were resurrected from the cheap wooden houses of the nineteenth century, but now they were fixed vertically instead of horizontally. Wood and cane-fibre and straw-boards intended only for hidden insulation astonished their own manufacturers when they became favourites of young architects. Anything woolly, coarse or tweedy in texture was welcomed as a contrast to, and relief from, a century of flush plaster. Just inside the front door, a screen formed of sheets of obscure glass held in a light wooden frame faced the visitor to every second architect's house of the post-war period.

If better Australian houses now began to resemble externally the small Mediterranean villas and farmhouses, with their crisp, chiselled shapes, sun-bleached terraces, whitewashed brick walls, casement windows, open ventilation grilles, creeper-covered pergolas and gabled, heavy tile roofs, the resemblance was not a stylistic affectation. It was merely that somewhat similar climatic and geographic conditions, combined with the adopted tradition of similar materials, had eventually led Australia to this elementary, notably unaffected and wholesome house style. It was not coincidental that routine domestic building in most countries which indulged in detached dwellings began to draw closer to the Mediterranean type after World War II. This white gabled model was about as far as the twentieth-century concept of architecture could push traditional materials and the ordinary man's way of life. (Ironically enough, the Mediterranean house itself had wandered off on various exotic paths during the twentieth century.) Architectural theorists had been urging Mediterranean stylism on Australia for nearly a century. Now south-eastern Australia began gradually and involuntarily to adopt the look, while actually endeavouring for the first time to rid itself of any European influence.

The most striking evidence of the decorative revolution found in the new architects' houses was the sudden revulsion against dark stain on woodwork. Carpets left the floor and the light Australian hardwood floor-boards were waxed. Small Indian and lambswool rugs were scattered between the few pieces of blond wood furniture.

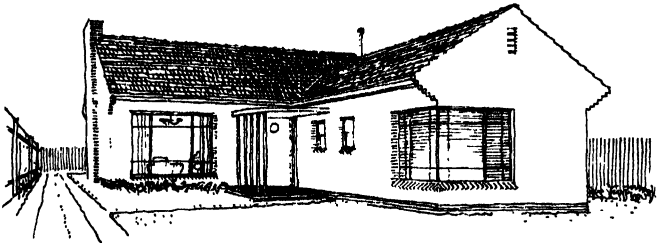
The sofa of the three-piece lounge suite was discarded. Two or three easy chairs were upholstered in plain colours and square lines. Webbed chairs based on the American Knoll design were made in Sydney in 1946 and later in other states. Light plywood chairs designed and made by Grant Featherston were familiar in Melbourne after 1948. The fire-place was no more than a rectangular hole at the bottom of a rectangular stack. The mantelshelf had vanished, but a set of low bookshelves was built-in beside the fire-place. All wardrobes were built into recesses in bedroom walls. Windows generally reverted to the casement, varied by a top-hung sash in Queensland. Rafters were exposed under eaves, and pergolas were frequently formed by an extension of several rafters, their ends supported by slim posts or light diagonally-braced trellises.

The designing builder was only a year or two behind the average architect on this occasion. By 1948, at least in Melbourne, the L-shaped plan seemed to be threatening the hitherto unquestioned supremacy of the asymmetrical villa plan. The work of the brighter builder-designer further showed a grudging admiration for the lightness, directness and precision of the contemporary architect's house. But the limitations set by his material suppliers and his inertia in structural invention often left his work with a clumsiness typified by oversize fascia-boards and cover-straps, and by his insistence on setting door knobs 4 ft. or so above the floor. This habit had been born with the century when doors had been turned upside down in the Queen Anne fashion swing. The smaller panels were put on top and the lock-set moved up with the dividing rail. Architects had dropped the knob back towards hand height in the early thirties, placing it centrally in the new flush doors.

The everyday designers of the postwar period wrought one considerable change upon the work of the 1934 pioneers

– they were vigorous with colour. They retained white as the invariable paint for all woodwork trims, pergolas, eaves and posts, but instead of pale creams and buffs on the plaster and brick surfaces, they substituted greyed tints, which gradually grew stronger until 1950, when an occasional dark tan or bottle-green wall shocked few people and lemon yellow surprised no one.

Whereas in most countries during the twentieth century, the design of one-family houses lagged behind public building, in Australia the better houses were usually far more imaginative than their larger contemporaries. By 1950, while the few large buildings which were permitted retained the solemn modern-classic approach born after the depression, single houses often touched the highest world standard in their class. They were frequently in advance of equivalent homes in Scandinavia and Switzerland, and superficially at least approached the extravagant development current in the U.S.A.



Major Steps of Stylism (11)

L-shape. After World War II, popular design underwent its most radical change since the invention of the Asymmetrical Front a century earlier. The L-shaped plan was the vernacular expression of architects' "open" planning. The change in house-shape was accompanied by a strong swing to superficial simplicity. Much ornament dropped away, but the deep-seated complexity of many standard building practices remained in such details as the clumsy boxed eave and its gross corbelled end at the gable. Bricks, steel windows and venetian blinds were cream, the spouting green, and the tile roof brown.

But domestic equipment still lagged behind. A successful young American business man could have looked round the better districts of the capitals and found a couple of hundred houses, well made and with white walls and large windows, any of which would have done him credit had he transported it to his home city. But across the threshold the American would not have been at home. He would not have understood the cold bedrooms and the single fire in the living-room. He would never have got used to the primitive bathroom, "the Australian Infernal Machine," as an American columnist described it, "with its hand-basin taps set too close to the basin to allow a tumbler to be filled." His wife would have revolted at the sight of a kitchen almost bereft of mechanical aids and stocked with the world's largest selection of fragile, dazzling plastic containers.

With the speeding of communications in the past half-century there had been talk of "the contracting globe". Elderly gentlemen for years past, reading the cable news at the breakfast table, had commented that the Old Country was getting closer. There could have been few Australians who heard Neville Chamberlain's broadcast, on the Sunday evening in September 1939, who did not feel that she had at last arrived. The Old Country was in the brown walnut mantel radio above the clinker-brick fire-place, calling Australians to war as they prepared their tea. But in the crafts of peace she, and the rest of the world, old and new, were more remote. Despite the cables and B.B.C. broadcasts, Australian urban development tended to retain a tedious time-lag behind world invention. Art as well as architectural movements, technical developments, new activities such as television, took as long to arrive as innovations did in the eighties. Hearing about things long before they saw them, tended to accentuate rather than to decrease the feeling of isolation among alert Australians.

In the early 1920's limited printings of Hardy Wilson's books, *The Cow Pasture Road* and *Old Colonial Architecture in N.S.W. and Tasmania,* had been widely circulated. Only 1,000 copies of the latter were printed, but they had drawn world attention to the fine quality of early craftsmanship. For a time Australian Colonial had had almost the reputation of the American. Wilson's big collotype-printed pencil drawings were reproduced many times in the next two decades. They became associated with Francis Greenway and the colonial period. The Macquarie style became known as the Hardy Wilson style.[1]

Wilson had found many of the best buildings dilapidated. In his drawings he had restored them to their original elegance, but when his back was turned the wood continued to rot and more plaster dropped off the ceilings. Stately balconies sagged and lofty rooms which had been some colonial lady's pride reeked with the sweet, stuffy smell of rats.

In the first flush of post-depression building, the rats went, and the historic buildings came down in clouds of dust to make room for new. By 1936 only a handful remained from all the hundreds built in New South Wales before the aesthetic slump of 1840. The destruction had been wanton and unashamed. The innocence of the executioners had been indicated by one little house near the corner of Hunter and O'Connell Streets in Parramatta, New South Wales. Sometime in the late 1920's a century-old Georgian cottage had been destroyed so that this house could be built. The old cottage was straight fronted with a verandah built under its single hipped roof and a line of light circular wooden columns on the verandah edge. When it was destroyed, the wrecker had had the presence of mind to salvage the wooden columns. He had given these to the builder of the new house, who had taken three of them, cut off the top two feet and had set these dismembered heads on the top of a fat brick pylon, such as was the habit in his day.

After World War II, the foundation which Hardy Wilson had dug was built upon by other historians. Following inevitably in his footsteps, they found that his drawings, lovingly and expertly executed in sharp architectural detail, were considerably more accurate than some of the hearsay on which he had based the historical aspects of his text.

M. H. Ellis did the research that was demanded on Francis Greenway, unearthing the extraordinary story of his early

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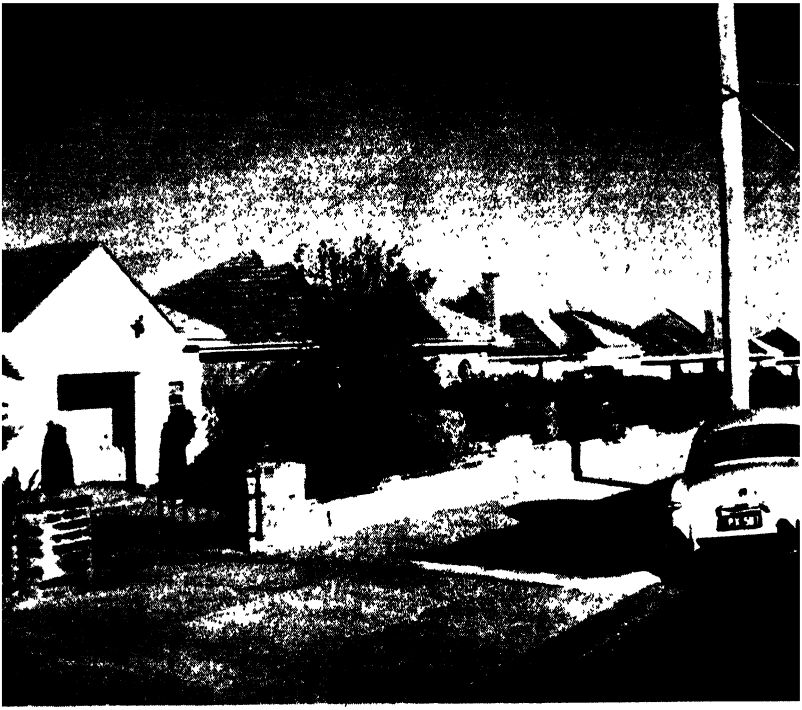
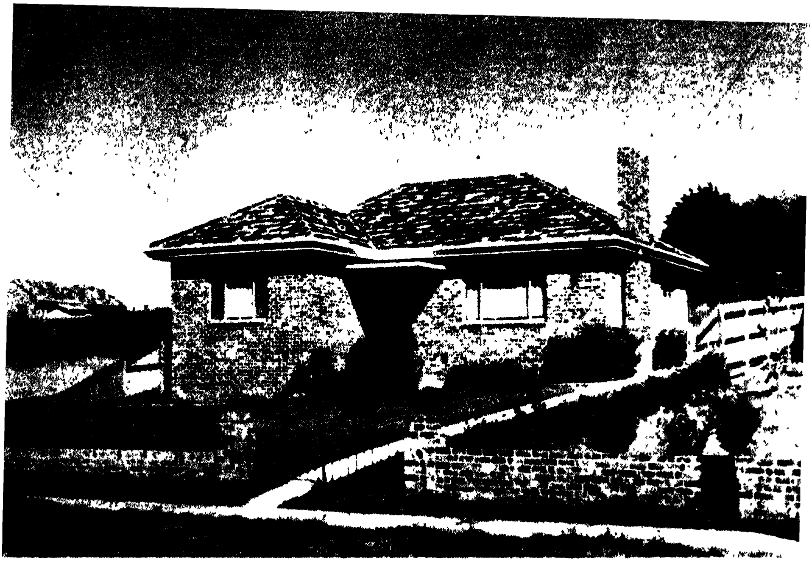
[1] William Hardy Wilson, who was born in Sydney on 14 February 1881, made his collection of a hundred freehand drawings and fifty measured drawings between 1912 and 1922. The originals were bought by the Commonwealth Government for £3,000.



HOME OF THE HOME: The Street in the Suburb. A fence which transforms itself every fifty feet, shrubs which grow no higher than a gardener's shears will reach, tiled roofs above the parade of façade styles, the "nature strip" planted with poles—and the lone two-storey house of the successful business man.



TOWN: The suburban villa, stripped to austerity in the 1940's. Red bricks and hipped tile roof, cream paint on the trimmings, "Chicago" windows, chimney on an outer wall, concrete-slab porch hood, wrought-iron gate, trim lawn, low shrubs, no trees, and grey paling side-fences.

bankruptcy in Bristol, his forgeries, his temper, and his driving enthusiasm for architecture. In 1949 the Cumberland County Council, Sydney's town-planning authority, made the first official move for preservation. Lists of historical homes were made for the Council's direction by the National Trust and the New South Wales Chapter of the Royal Australian Institute of Architects. Morton E. Herman collected the results of twenty-five years' interest and research on old buildings, tracing development to 1840.

All such moves to draw public attention to the quality of the early Colonial work had the indirect effect, usually unintentional, of sustaining the Georgian style in some new buildings. By 1950, deliberate stylism in the image of all other historic periods had disappeared from the working-class house. But the Georgian approach was still alive in the white-collar home. The average successful business man and the average successful builder associated it with captains of industry, with the quiet streets of Toorak or Vaucluse, and the polished work of the best established architectural firms. Many well-to-do men still believed that one decision remained after the plan of the house had been settled: the style must be determined as between modern and Georgian. If the latter were selected, windows would be divided by vertical as well as the inevitable horizontal bars, the interior mouldings of wood and plaster would be curved rather than square and the front door would have a pediment painted light cream.

An essential element of the style they referred to as modern was the corner window. This was not always the blatant piece of fashion-mongering it appeared to be. Like most details of the post-war house, it often had a strong practical background. While most designers of discretion unhesitatingly condemned it as unmitigated stylism based on the cantilever of the early International Style, its fashionable appearance was in fact only one reason for its popularity. Most owners who adopted it were genuinely of the belief that the corner was the most suitable and efficient place for the opening to each room. Their principal reasons were: (1) The best aspect is seldom directly parallel to the wall of the room; a corner window gives freedom to centre the best view in the opening. (2) A corner window leaves a greater length of wall free for furniture. (3) It allows diagonal cross-ventilation (if the door is placed in the opposite corner).

Now that the practice was accepted, it was absorbed into the repertoire of the standard-window manufacturer, and was preserved for the most obscure and unanswerable reason: steel angles suitable for lintels over brick openings were in short supply. Steel-window manufacturers did not provide lintels for straight windows, but they sold corner windows as an assembly complete with corner column and head angles. Thus, if the owners had decided, on second thoughts, that their three reasons for including corner windows in the plan did not bear close investigation, the builder would not have let them change their minds.

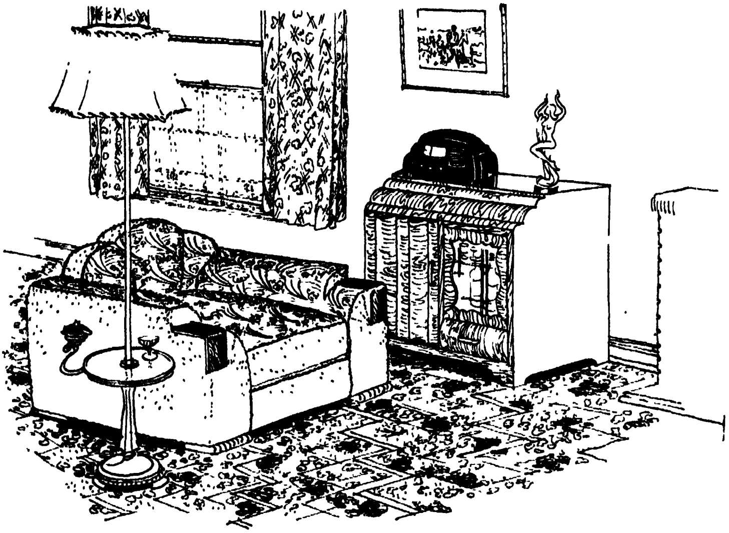
Throughout the development of Australia, the proportion of houses to population had varied with the economic state. In 1841 the average was eight people per dwelling. This figure dropped gradually to 1861 when it levelled out at 48·4. It stayed about this level in most states until the eighties. House-sharing increased the proportion to over five per house in the nineties. The twentieth-century boom in small cottages reduced it again to about four to one. In the depression, doubling-up raised the average slightly. By 1947, when public recognition of the great housing shortage was most acute, the average had in fact dropped to 3·9 inmates per house. Eighty-five per cent of Australians then lived in unshared private houses, against less than half-a-million in flats, tenements, institutions, hospitals, hostels, boarding-houses, waggons, tents, ships or on the park benches.

During the twentieth century, New South Wales' builders were busiest and Tasmania's were slackest. In 1901 New South Wales had only 4,093 more private dwellings than the next state, Victoria (237,448 to 233,355). By 1933 New South Wales had 163,173 more and by 1950 it was nearly 250,000 houses ahead of Victoria.

11

The Price of Privacy

SINCE colonization, the towns and cities of Australia had been growing from the grids which surveyors had set out during the first days of settlement. The cities had accepted the rectangular geometric cue and had spread wide in fifty-feet steps, mating with, and then devouring, small neighbouring villages and spreading on. By this process the great majority of Australians had achieved private houses. However, factories had sometimes become entangled with residential areas and slum areas owned by absentee landlords were extensive in most big towns. With some rare exceptions already noted, natural attractions were destroyed by undirected commerce or commandeered for the homes of a wealthy few. Riversides and beaches in and near the suburbs had become overcrowded and squalid. Traffic jams and parking problems beset every city. In 1945, although many citizens appreciated the origin of these troubles, few were as yet inclined to consider seriously the pleas of the planner, whose voice was hoarse with reiterating the same advice for more than a century. But nearly every man who sought land to build a new house found himself involuntarily interested in his urban plan. Australian cities, spreading at an even single-storey thickness over the land, were now the largest, per head of population, in the world. The little man could still build his own private castle, but it might be beyond the reach of the pipes and wires which conveyed twentieth century comfort, and it would certainly be so remote from his work that at least one-eighth of his waking hours would be taken in travel. The planner asked: How much longer can we go on like this? In ten years at most, at the present rate of expansion, will not our big cities choke themselves out like over-stimulated weeds? How far can a man travel each day? How thinly will city amenities spread? How dull can life become? Had not Australia already disproved her own thesis that every man can have a manor?



Part of a Living-room, c. 1950

In lower and middle income houses, most furniture was bought on "terms" (time-payment). Furniture stores patronized by "cash customers" stocked many more plain colours in rugs and fabrics. There was a rather sordid functionalism about "terms" design. The gross armchair (part of a suite of two chairs and a sofa) had a core of roughest box-wood; it was cheaper to make than a smaller chair which exposed its wooden frame. Light-coloured fabric sometimes covered the sides and back, but patterned Genoa velvet disguised dirt marks on all wearing surfaces. Similarly, the pattern of the Axminster carpet and the shadow tissue curtain disguised dirty footprints and fingerprints respectively. The cocktail cabinet was walnut, the radio plastic, the ornament glazed coloured china, the lampstand chromium and cream plastic, the picture a print of a fox-hunt scene, the colour accents usually cream and burgundy.

Some intending home-builders, who could not face the prospect of a lifetime in the raw new suburbs where vacant land was advertised, bought old homes near the cities and removed the verandahs, or fled miles into the bush. But the old homes seemed damp, even with their remodelled fire-places and new kitchens, and tedious travel to the city took the edge off the pleasure of a country view.

The planners were still pleading, and sometimes now they were allowed to demonstrate. By 1950 many big towns had on paper some pattern for the future. Sydney, the oldest and most tangled, the superb harbour disfigured by misdirected enthusiasm, was the first capital city to achieve a new plan. It had a drawing which showed any citizen who cared to examine it some hope of order. This had been prepared for the Cumberland County Council, representing the various municipalities of greater Sydney. Typical of many plans for smaller towns, it accepted much of the existing structure of the city but attempted to systemize future growth. It improved road access to certain badly served areas and widened the worst traffic bottlenecks. Many New South Wales architects felt that it tried to smooth over roughnesses by applying a coat of plaster rather than by cutting out the decay. A committee of architects criticized it for not stating "a bolder attitude to the redesign of inner built-up areas", for its failure to develop the port and for its inadequate provision of parklands to many large residential areas. It seemed that badly brought up Sydney would be spared the rod again. Sound as this and many other ratified town plans were, they seemed to many architects an anti-climax to the long struggle on planning principle. Their great caution generally seemed to be their greatest practical impediment. "Unfortunately", as the architects' committee said of the Sydney plan, "it lacks any dramatic quality which might capture public imagination and so stimulate popular will towards making Sydney a better place to live."

The need to stimulate popular will towards making better places for living seemed urgent to many other sociologists in the middle of the twentieth century. Surveying the countryside blighted under the suburban advance they began to doubt the goal of a century and a half — the custom-built home, the private garden for every man. More letters and articles than ever before were in the press, pleading with governments and private citizens to consider other alternatives — apartment blocks with communal amenities, at least for childless adults; prefabrication, so that mechanical domestic equipment could be standardized and brought within the workingman's reach. But if the anarchy of individual cottages were to prevail, they asked every man who built his home to try, for the community's sake and his own, to treat seriously the design of his house; they begged him to be logical, unpretentious, thoughtful with colour; they implored him to spare the trees. They asked him to be brave enough to risk offending his neighbour's taste, and to ignore the possible likes or dislikes of his potential guests or future buyers of the property. They advised him to plan a home for his own family, no other, with all the care and enthusiasm he could muster.

Sometimes these pleas were heeded. In 1951 there seemed, to those who wished to find it, a higher incidence of intelligent design than ever before. In some areas one in every three or four houses was an airy place that appeared to be motivated by the genuine excitement of home-building. But, despite these examples, in most towns a majority of something like ten to one still stood in the image of the merchants' houses of eighteenth-century England.

The human frame and human nature had not changed since 1788. The Australian still needed shelter which would provide places in which to cook, to eat, to sit quietly and smoke, and to sleep. Like his English parent, he still loved his private castle, the warmth and comfort of his own family hearth. But many things had changed. The Australians, in general, were no longer convicts, immigrants, or soldiers. The twentieth-century Australian sped across the sky of his continent in a day. His daily life was assisted and enlivened by numerous vehicles moving horizontally and vertically, by magnificently coloured magazines and films, by air-conditioned restaurants and interminable radio serials. In all aspects of his everyday life, only one major tradition was unchanged: his house was still essentially as it had always been.

The building trade, the largest secondary industry in the Commonwealth, used on his home the techniques which were old when Governor Phillip landed. Six years after World

War II, with all attempts at mass-production shelved, it faced a new half-century of unlimited technical potentialities with little more than a trowel, a saw and a hammer.

The home-builder faced it with his familiar collection of rooms, still doubtful about what "architectural treatment", as the magazines had been saying for a century, he should use. Undoubtedly there would be more exotic revivals in the future. Californian or Spanish, even Gothic forms might swing in from time to time by way of the department store windows. But it seemed safe to assume that any such interludes would be entirely flippant, short-lived, and affecting only ornamental trifles.

The philosophy of functional simplicity had been established and consolidated gradually and seemed set to rule the character of the small house far into the foreseeable future. The speculative builder and the everyday designer still accepted simplicity only negatively. If, from past experience, one assessed the time-lag between the advanced architect and the public at fifteen years, it seemed reasonable to assume that the builders would take simplicity as a positive force sometime in the early 1960's. The rules of simplicity, though beyond the conception of the 1950 everyday designer, would by 1965 be familiar enough to become part of suburban building lore. Then men not thoroughly trained in design would apply it in the same way as any historical stylistic rules were applied before 1935 or the Functionalists' details were applied between 1935 and 1950. The routine designer would possibly extract rules-of-thumb from the leading work of the 1940 decade, such as, perhaps, "separate the planes" or "one wall — one material", which would lead to rooms in which each wall, side to side and floor to ceiling, would consist of nothing but glass, masonry, strongly-coloured plaster or wood, respectively. Plans would be easier and more plainly rectangular. Some traditional products would not stand the scrutiny of builders who believed that the nature of every material should be respected.

The popular acceptance of this sort of technique would undoubtedly stimulate the architects to find other ways of expressing themselves within the philosophy of rationalism.

Already a development of the principle of suspension, by the use of wire supports, was suggesting new shapes. New artists with advanced and esoteric languages would appear. But there were many years of work with familiar techniques ahead before any radical popular transformation of the Australian home would occur. Then it would probably come only in response to local manufacture and lowered costs of plastic and composite materials, and to the habitual use of improved mechanical equipment.

PART II

THE ARCHITECTURAL INFLUENCES

12

Materials and Methods

THE house, the home, the permanent address — this was the white man's idea; the blacks had no use for it. For unknown centuries they had wandered through bush, desert and soaking mountain forest, carrying less protection than the meanest marsupial.

Insulation from excesses of the elements, which is the basis of human home-building, was not among the achievements of the Australian aborigine. He knew nothing of agriculture, which might have held him to one place long enough to make building worth while. He had not learnt the habits of acquisition and accumulation, which might have led him to make storehouses. He wandered, killing an animal, spearing a fish, pounding an insect or grubbing the ground for roots and herbs for immediate food. When he had exploited one area he passed on. In the north he went naked, in the south he wore kangaroo, wallaby and opossum skins, slipped over one shoulder and fastened with a wooden pin. He improvised rugs from the seaweed and lake-scum at hand, and used a skull as a water-bottle. He slept before the tribal fire on a bed of grass or rushes, in a hollow tree or a cave, or behind a low breakwind of boughs set with prophetic accuracy against the force of the coming night wind.

His most advanced structures were of bark, cut from the tree in great sheets, sometimes twelve feet by ten feet in size. He would heat it and bend it for canoes or straighten it for open-fronted tribal huts in favoured locations. He bound logs with reeds to make rafts and outriggers for his canoes.

Whenever the white man was forced to rely on the indigenous materials he used bark, grass, sticks and stones in much the same manner as the aborigines. He even took their word "humpy" into his language to describe a bush hut. In every Australian colony the building story ran along similar lines. From eastern Sydney in 1788 to Western Australia in 1825 the same routine was repeated. The white man stepped from a boat, ran up a flag, and put up a tent. Next day he started building permanent shelters.

His first house was of wattle and dab, his second pisé, his third of bark sheets, his fourth a log cabin, his fifth of axed slabs. Then the nails and sheets of iron and glass began to arrive from England or from a previously settled colony. Fully prefabricated houses came for his leaders. Bricks were made, stone was quarried, cement, steel, pulpboards and plastics followed each other from overseas. That was the white man's order of structural progress. As late as 1900 whenever he started a new town in the back blocks he followed the sequence through.

The first winters in every colony were made miserable by a succession of collapses of homes built inadequately of earth construction. Wattle-and-dab (timber framing infilled with clay) and pisé (rammed earth) required some research, care and skill to be successful. Early builders, taking the earth as they found it without heed of the proportion of soil to clay or concern for the sudden heavy rains, saw their earth walls washing away at alarming speed. Some of the most suitable sticks for wattle-and-dab construction were provided by yellow-blossomed native trees of the Acacia family, which henceforth became known in Australia as "wattle".

The hard wood of the gums blunted the tools which had been brought for the convicts of Port Jackson. The soft cabbage-tree was soon exhausted. There were no strong reeds about, no soft woods of sufficient size nor anything else provided by nature in a form readily adaptable to building urgently needed shelters. Phillip imported some Norfolk Island pine for his own house. Moreover, there were few experienced builders; no more than a dozen carpenters among the convicts. In desperation Phillip hired sixteen ship's carpenters from the Navy and placed them in charge of teams of a hundred convicts. Similarly, in Adelaide nearly half a century later, the architect for the first government house, of mud and sticks, was a sailor, and the workmen were seamen from H.M.S. *Buffalo*. The Australian's characteristic ability at easy improvization developed here. Grass, stones, mud and tree trunks were put together in the best order which presented itself at the moment.

The earliest huts were tent-shaped, framed out of saplings and thatched with grass about a foot thick. Floors were lime and clay, chimneys were adobe or pisé or turf slab, windows were shuttered holes in the walls. The fire-places were lined with rough stones with a larger stone hearth for cooking. A little later walls were made of lines of posts plastered with mud. This was the typical Port Phillip squatter's home of the 1830's:

"In the centre stands the principal hut, with two or three others to serve as offices. Their appearance is characteristic of a savage existence. The walls are of wattle and dab while the roof is covered with rolls of bark, pressed by wooden stretchers into place. Two windows, a mud floor and a huge misshapen chimney of turf completes a pretty fair specimen of a bush shack. The station-hands, the rouseabout and the shepherds were no worse off, as witness the following authentic monologue: 'We roughed it together in them days; 'n' if any cove reckons 'e didn't get a fair go, just you arst 'im whether the Master 'n' Missus done any better.' "[1]

Slab constructors were divided into two schools of thought. Each based their system on thick rough split planks six or seven inches wide by two or three inches thick by some nine feet long. They were at variance in the method of laying. The majority dug corner-holes some two feet deep, erected strong grooved corner-posts and slipped the planks in from above one on top of the other. The other school fixed the planks vertically, inserting them in grooved logs at top and bottom. Roofs were similarly treated. In each process great uneven slits appeared between the rough slabs. Some builders attempted to fill them with clay, caked on internally. In wet weather the clay ran into sticky puddles on the floor. In summer it cracked and crumbled away, and on windy nights the candles flickered out in the draughts through the walls. But, until civilization arrived in the form of nails, this was the best they could do.

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[1] Quoted by Hugh McCrae, *Georgiana's Journal* (Melbourne, 1934).

The first nails were hefty, hand-wrought, square-shafted pieces, but they transformed building technique. Straight-grained stringy bark could then be split into weatherboards and nailed to the outside surface of the slabs. They kept the building waterproof while the green structure was allowed to shrink and warp and settle down. Then the interior could be clay-plastered with the prospect of reasonable permanency. Thatched roofs began to give way to iron, as small ribbed and corrugated sheets arrived. Glass came to fill the shuttered holes in the walls which had served as windows. Bricks were made, timber was planed, plank walls were replaced by lighter frameworks neatly sheeted on each side, stone was quarried, ceilings were boarded or lathed and plastered. Next, slates instead of iron covered the roof, walls were papered, neat cover-straps and architraves filled the gaps, windows were screened by louvred shutters hinged on the outside frame, tongued and grooved boards sealed the floor, doors became six-panelled, precisely made, and snugly fitted in their frames. All the cracks were filled. Australia's struggle for shelter was over.

This struggle was fought out in each colony in turn with only minor variations, except in tempo. At Sydney Cove in 1788 Captain Phillip's men used cabbage-tree slabs coated with clay. By 1835, when the Melbourne area was being settled, Sydney was an established town of fine stone and brick buildings, with a water supply, a school of arts and other such civilizing influences. But in the new settlement in the south John Pascoe Fawkner and John Batman were puddling about in the mud looking for nice strong lumps of turf to build their living rooms. Sydney, originally a convict society under military dictatorship, had progressed with painful hesitancy at first. Melbourne, a collection of competitive enterprises starting at a favourable moment in history, developed materially in five years farther than Sydney had done in its first quarter-century.

Sydney had started out with determination. Two months after Captain Phillip landed he had set the convicts to work on brick production at Brickfield Hill, but he could not supply the lime for mortar and the biscuit-coloured bricks had to be laid in a thick mixture of clay. The single storey, later to become a characteristic Australian building habit, was as high as such walls would stand. Even then they were liable to collapse in the face of driving rain. Most of the lime and glass which Phillip had brought was used to build his own Government House, which building was decades ahead of the average cottage.

Thus structural progress jerked forward, accelerating for a governor or police magistrate, bogging down in periods of political degeneracy as in the 1790's or of financial depression as in 1841, stirred round in confusion in the gold rush of 1851. But each colony eventually discovered its favourite building materials and settled down to making cities; Queensland with wood and iron predominating; New South Wales, South Australia and Tasmania with stone and brick; Victoria and Western Australia with brick and wood. Bark, clay and turf still lived on in country buildings. Even in 1891 at the climax of the great land-boom there were over 10,000 bark shanties in Victoria alone (against 70,000 brick and stone houses and 155,000 in timber).

The native timbers were greedily used by the pioneers, but as soon as each colony gained respectability after its first decade of struggle the local trees were scorned for special work. Structural and joinery timbers were imported in great quantity in all periods. Fine local timber was often squandered in huge beams in lowly utility buildings.

Most hardwoods twisted badly while green, but were reliable, strong and decorative when effectively pre-dried. Probably the first kiln-drier in the world was Rieser's patent kiln at Hobart about 1890. Others operated on the mainland before 1900, but local woods were not generally used until about 1917, when European imports were reduced. Prejudice against them persisted till the late 1920's. At this time kiln drying was perfected by the addition of a re-conditioning process discovered at Alexandra, Victoria, by James and George Grant and developed by the Forest Products Division of the C.S.I.R. Local hardwoods, in their natural honey colour, then became popular for floor and trimmings, and by 1948, when mills could not fulfil demands, public prejudice had swung to the other extreme and now turned against the Baltic wood to which builders had been forced to return.

The original solid plank wall gradually dissolved into a lighter framework. At first, "studs" spaced 18 in. apart were each 4 in. by 3 in., later 4 in. by 2 in., and finally standardised and officially regulated at 4 in. by 1½ in. This appeared to be the practical minimum.

Floor, ceiling and roof timbers in both wooden and brick-walled houses also suffered whittling. In 1850, floor and ceiling joists were 6 in. by 3 in., spaced 18 in. on centres. In 1950 they were 4 in. by 2 in. and 4 in. by 1½ in. respectively, still spaced at 18 in. Similarly, flooring boards were 1½ in. thick in 1850, ⅞ in. or ¾ in. in 1950. The gradual reduction of timber framing was carried on in secret behind the weatherboards, tiles and plaster. Only on rare occasions did anyone seek to organize and expose the complexity of studs, "nogging" and bracing which made up the conventional frame.[2]

Standard brick construction underwent more basic changes in technique. When lime could be obtained in pioneer Sydney, burnt from the beach shells or imported, it was mixed with two parts of sand to make mortar. At first, wall foundations consisted of rough stones laid in the ground. Later they were made of axed basalt, then bulk concrete and finally reinforced concrete, but in the sandy foundations of Perth the stone base was never supplanted by concrete. The common practice there was to built up to floor level in a soft siliceous limestone, spread at the base to form a continuous strip footing. This base was customarily built by specialist contractors and poorly executed,[3] with the result that minor foundation failures and cracked walls were familiar.

Colonial builders, free of the numerous restrictive building regulations of eighteenth-century London, nevertheless conformed by habit to many of the parent city's standard

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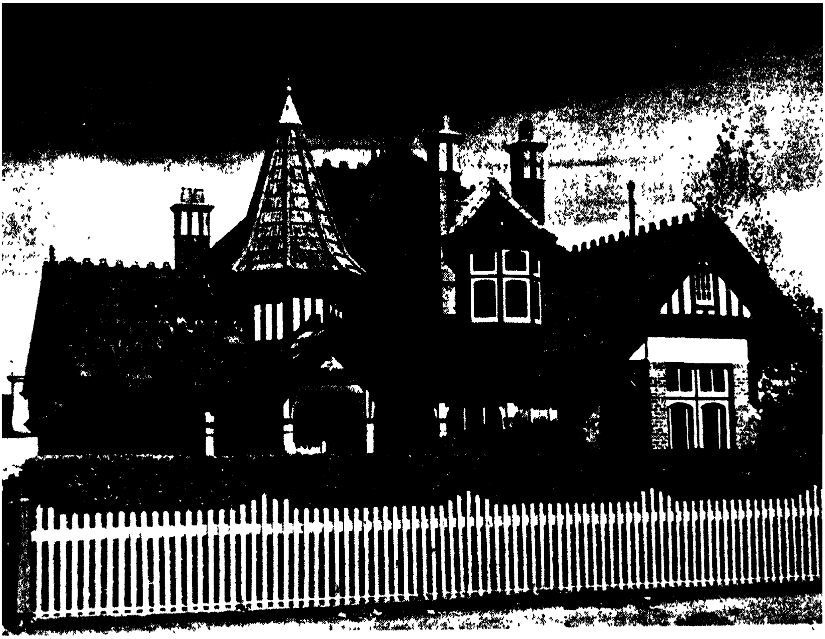
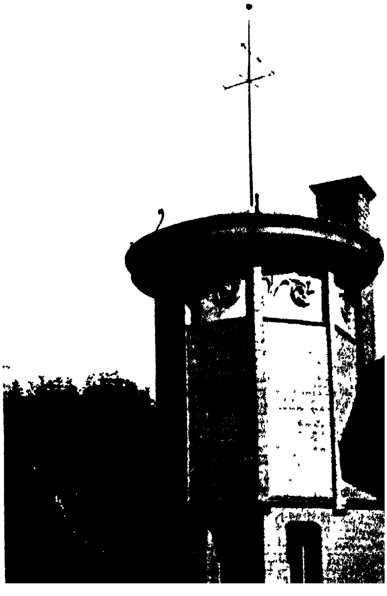
[2] Two Victorian architects experimented with simplified timber framing exposed externally: H. Desbrowe Annear for a holiday home in 1922, Best Overend for school pavilions at Koornong, Warrandyte, 1939.

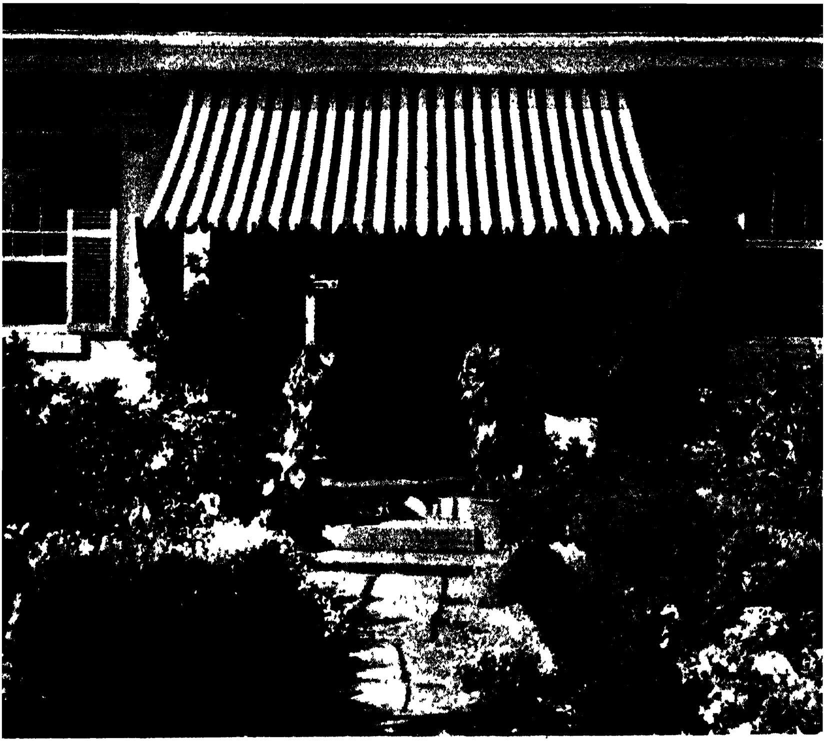
[3] *Commonwealth Experimental Building Station Report* SB2, 1949.



QUEEN ANNE ROOFS
Red bricks and terra-cotta tiles round the turn of the century, with picturesque sculptured form, leadlight dormer windows, octagonal pyramid spire, false half-timbered gables, and frilled ridges—house at Camberwell, Victoria.



Bay window and tower with terracotta *Art Nouveau* frieze by Robert Haddon in his own home, "Anselm", Caulfield, Victoria (1906).



HARDY WILSON: his own home, "Purulia", Wahroonga, N.S.W. (1912). "If you were to ask me what is most beautiful in Australia, I would say—light. And if you were to ask me what is most beautiful at 'Purulia', I would say the reflected light on the eaves. Along the sunny northern wall there are white flag-stones; the eaves are white plaster; and the wall is white too, a subtle white with grey and gold in it. The sunlight on the stones is reflected on the plaster and the wall lends a golden glow to the reflection. The golden white is a foil to the garden. Now that gay flowers and fragrant shrubs merge wall with earth, the neighbours who were loudest in their invective come and lean upon the garden wall. Some laugh, others admire, and all resentment has flown."—H. W., "Building Purulia", *Domestic Architecture in Australia*, Sydney (1919).

details and dimensions. Thus, for instance, the common stock brick began at roughly the London size, decreed by statute in 1739, 8¾ in. by 4⅛ in. by 2½ in. The size varied in different localities, but after the introduction of the machine-made brick, by the Hoffman Brick Co., Melbourne, in 1870, it was standardized at 9 in. by 4½ in. by 3 in. Originally, the outer walls of good houses were 14 in. thick, laid generally in Flemish bond.[4] Poorer outer walls were 9 in., laid in Colonial bond.[5] Even when externally plastered the thinner walls leaked if exposed to driving rain, but as late as 1890 it was common practice to economize even in expensive houses by building the leeward walls in 9 in. work.

When building began to recover after the crash of 1893, a fascinating innovation was attracting the attention of all builders. External walls were being built in two parallel rows of 4½ in. work separated some 2 in. and tied together with twisted cast-iron bars. The 11 in. wall had arrived. This "hollow" or "cavity" wall had many advantages. It was a good insulator, it used no more bricks than a 9 in. wall, it was strong enough to carry two storeys and it presented a neat appearance without headers (brick ends) showing on either face. Furthermore it was watertight. It was the natural choice for the brick and terra-cotta style then coming into vogue. It became universally accepted with the red Queen Anne and remained for at least fifty years the standard brick structural technique of Australia. After 1900 internal partitions were normally built in 4½ in. work, except on the ground floor of better quality two-storied houses, where they remained 9 inches thick.

During the twentieth century, while the 11 in. thick external wall retained its position in first-class construction, jerry-builders were whittling again at the little houses of the outer suburbs. In South Australia, they discovered that a few significant pounds could be saved by building the internal partitions and the inner skin of the hollow wall in brick-on-edge (3 in. thick). In Victoria, where timber construction had never earned the contempt in which it was held in other states, they laid a single 4½ in. brick wall in place of weatherboards round a timber building. A brick base was built, a wooden frame was nailed up, the roof was pitched to the wood, then a veneer of brickwork was carried up round the doors and windows. The house looked like a brick one, which pleased owners who had been asked to pay considerably less. by 1950, brick-on-edge was acceptable technique in South Australia and New South Wales and brick-veneer had almost replaced brick in small houses in Victoria.[6] Other states were inclined to let the standard building techniques remain at the 1900 level and to concentrate on new materials if and when they sought progress in structure.

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[4] Headers (brick ends) and stretchers (brick sides) alternating in each course.

[5] Three courses of stretchers, the fourth of headers.

The treatment of brickwork revolved several cycles during the 150 years. In the early constructive years of New South Wales and Tasmania, the texture of brick was valued for its own sake. The early hand-made bricks were rough and warm, contrasting nicely with the sharp white paint on the timber trims and the twisted grey of the shingle roofs. In such famous building as St. Matthew's church at Windsor, New South Wales, Francis Greenway used the rich texture of his orange bricks as pure decoration ("he seems to have caught the sunlight of the Hawkesbury Valley on his glowing westward wall," Hardy Wilson wrote). But less vigorous people, intent only on excluding the harsh sunlight and recreating indoors the cool, grey elegance they had left behind, covered the bricks with smoothly trowelled plaster.

By 1850 the brickwork of the average upper-class house was covered on all surfaces visible to front-door guests or to the master of the house in his daily routine. Outside, only the back was left in naked brick. Inside, only the kitchen and any rear utility rooms were unplastered and whitewashed.

This attitude lasted long after the bricks were commercially produced and precise in form. They were hidden beneath cement rendering neatly ruled to simulate stone till the end of the Italianate era in the eighties. Then, when even simulated stone began to look too bare to late Victorian eyes, the texture of brickwork was sought once more. But an even earthy texture was no longer the aim. Overburnt brown bricks and underburnt creams were arranged with the red in stripes and diamonds and radiating arches over the windows.

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[6] In 1951 the numbers of brick, brick veneer, and timber dwellings in Victoria were approximately in the proportions of 1: 2: 6.

In 1900 the machine-made standard red came into its own. The colour varied with the clay of each locality, but the practice of tuck-pointing brought them all to a heavy red, discordantly similar to the tangerine red terra-cotta roof.

Purist tuck-pointers performed their work as follows: The joints of the brickwork were raked out about a quarter of an inch from the surface. A new mortar mix was artificially coloured to match the bricks and was carefully inserted in the joints until the whole wall appeared a conglomerate mass. Then white mortar was applied with a special tool in a narrow, square-edged band over the centre of each joint. The less conscientious tuck-pointer simplified the process. Instead of matching coloured mortar to the bricks, he coated the bricks as well as the original grey mortar with red paint, adding the false white joints to this surface. More cynical tuck-pointers sometimes ignored the masons' bond altogether, creating their own pattern of joints on the red base.

There was a reaction to this about 1917, in the Californian Bungalow. With their eyes suddenly turned to the earth and the forest, builders would no longer accept the precision of machine-made bricks and ruled lines, or the mechanical red of their colour. They were covered with pebble-dash or rough-cast cement or cobblestones. If they were exposed, the rough over-burnt clinkers, hitherto discarded, were selected for the most prominent faces and now and then a bat, especially broken for the occasion, was projected beyond the vertical line of the wall.

After the 1929 depression, rusticity being discarded in favour of a smooth surface which indicated that prosperity had at last come round the corner, plaster and pressed cement ornament returned. But by 1940 it was beginning to wear off again as ethics in material usage were being resurrected by architects. The painted brick surface was sometimes accepted; at first only on the external walls, then on fire-place breasts and other such indoor features. For a short time after

World War II the more advanced architects' houses often enough exposed and painted the bricks wherever they occurred. But to the average home-builder, with his eye on maintenance costs, the ideal wall was made of bricks specially prepared for facings in a light cream colour.

The pioneer in each colony soon discovered the presence of satisfactory building stone. Searching the undergrowth near their coastal settlements they found limitless quantities of workable freestone beneath Sydney, near Adelaide and Hobart, and at Donnybrook in Western Australia. A variety of basalts was scattered over the eastern states. Around the coast there were coarse but adequate granites. At Mt. Gambier, South Australia, a soft and easily worked limestone was found. Later, some marble showed up. These stones were adopted without hesitation for general use on public buildings. Their adoption in domestic building varied from colony to colony according to the cost of labour at the time, to the number of masons available, and to the workability of the stone. In Sydney, only the most palatial houses could afford to substitute sandstone for the standard brick. But once it was selected it was used generously, as in "Fernhill" (1842), the walls of which were 2 ft. 6 in. thick.

Victoria used any basalt which came to hand, fine or coarse, blue or brown, for both public buildings and for houses. It was used with classical feeling, as in "Bishopscourt" (1853), but it was most familiar in the tall, narrow, high-gabled Gothic, as in "The Hawthorns" (*c.* 1850). Charles Laing, one of Melbourne's first practitioners, built several such places in Melbourne and Geelong, painting the fretworked bargeboards white against the dark stone. The walls were built in rubble. Sometimes a semblance of regularity was given by tuck-pointing which ignored the shorter joints and combined several stones within one neat white border. At door and window openings and at corners, squarely axed basalt or brickwork dressings provided a precise finish for fixing joinery.

Mt. Gambier's soft limestone was the only stone that could compete with bricks in twentieth-century housing. Sawn by hand into 4 in. slabs in the quarry, it was used extensively in its own area, in Adelaide, and sometimes as far afield as Melbourne. The 4 in. slabs were built in double thickness, separated by a cavity for external walls and in single thickness for internal partitions.

The Museum for Building Materials was a short, ironic little sketch played out in a single year (1859-1860) in Melbourne. If it started with the best of intentions, it finished as a trial of strength between the architects and the builders, with the government acting as a reluctant, embarrassed referee. It started as an idea of J. A. Knight, president of the Victorian Institute of Architects. He proposed a building to house a continuous display of building materials and techniques. It was an idea which appealed to the profession whenever it was proposed in any state. And it did frequently arise, because the advantages to architects were obvious. They would gain a convenient way of studying all the materials and techniques available; they would find it easier to keep in touch with new development in technique and with new materials; they could take questioning clients there to save themselves tedious explanations. Most important of all, they would be provided with a yardstick for all building practices.

One of the greatest legal difficulties which an architect was likely to confront was the inexactitude of the language at his command when he wrote a specification. From 1850 to 1950 the usual architectural specification was full of loose terms and phrases such as instructions to "do all work necessary and proper to the complete fulfilment" and to "ensure that work is done and finished in the most workmanlike manner" and so on. If there had been a government-sponsored house of standards to which reference could be made, these hopeful terms would have gained authority. Instead of mumbling "best" and "proper", the architect could have stated that workmanship must accord with example X24 B(ii) as exhibited at the Building Museum, and immediately he would have determined the exact standard, recognizable to a court of law in case of a dispute.

Many architects in every age appreciated these points, and so did many builders. But while an architect regretted the inaccuracy of "best" and "proper", the builder had reason to fear the setting up of exact laboratory samples for such inexact sciences as masonry and carpentry. However, the builders supported the architects on this occasion. Together they appealed to the government, and finally £3,000 was voted. Mr. Knight was allowed to start. His museum actually began building in March 1859, beside the Public Works Offices in Queen Street. It sat on a 36 ft. frontage, was 90 feet deep and had a façade 33 feet high, in Roman Doric. The greater part of it was a lofty hall, in which were to be exhibited specimens of building materials from every colony and from overseas. But the greatest display of materials was not here; it was the building itself, which was a patchwork of every available material. On one side were panels of dozens of different stones, from Adelaide marble to Normanby limestone. On the opposite side were stone pilasters and panels of bricks from every respectable manufacturer in the colony. The base was in bluestone, vermiculated in four different designs, finished in every conceivable way — tooled, picked, rock-faced and so on. The interior played up the different stucco finishes. The roof frame embodied European, American and Australian timbers.

Two heavy arbitration cases occurred between the government and railway contractors just as building began, and stressed the potential value of the scheme. In each case the government and the contractor were at variance on the definition of a technical term. "What is rubble?" "What is axed dressed?" they asked in court, and no one could tell them with certainty.

While building was still in progress Knight was active. In July, in the incomplete building, he conducted a series of experiments to test the crushing strength of various Australian stones and read a paper to the Institute on his findings. But now a remarkable change began to take place in the attitude of the builders who had originally helped to sponsor the project.

As the beautifully executed samples of workmanship began to take shape on the building, the benedictory smile of the builders faded. The thing was being built too well, with a standard of workmanship to which any builder would have been foolish to bind himself. The Builders' Association turned its back on the project. The government baulked. The architects pleaded and the government, after turning the matter over once or twice, suggested a three-way split on administration and costs – by which the builders would be asked to carry one-third of the expense of an institution established to check their work.

Nobody expected them to accept. The project collapsed and the building, before it was ever completed for its original task, was subdivided into offices for the hungry Department of Public Works.

Meanwhile, the roofs had been developing. Always they had been in two classes. From the very beginning there were tiles for the leaders' houses and various less substantial-looking alternatives for those of the lower levels. Phillip's Government House of 1788-90, the first house of pretensions, had tiles made by the convicts at Brickfield Hill, fastened with wooden pegs made by women convicts. The first roofs over the troops and the convicts were made of bark, large sheets picked up on aboriginal camping grounds, or smaller pieces stripped off the sides of eucalypts as cleanly as the skin off an orange. Split logs were pitched as rafters in a gable from the walls, the bark was applied and lateral sticks were tied on top to hold it in place. This practice remained for some time on verandahs and sheds after it had given way to shingling on the main roof of the home. Shingles, split from the great green trunks of the Peppermint Gum and other eucalypts, twisted, split and weathered to a silver-grey on the roofs of New South Wales and Tasmania. They became an essential part of the Old Colonial tradition. But the danger from bush-fires was too great; the shingles gave way to iron in small multi-ribbed or corrugated sheets.

Special curved corrugated-iron sheets were made for verandahs. The earlier model bent upwards in a slow arc as if a textile had been draped from the eaves to the bressumer connecting the verandah posts. The later model ran straight from the eaves for three-quarters of its length then dipped in a determined quadrant to the post line. Both sheets were accompanied by a supporting framework which was functionally satisfying and light enough to awaken the admiration of later generations of students of architecture. In the one case of these verandahs the strength of sheet-iron was acknowledged by the early builders. Instead of calling upon the timber frame to provide all the strength of the structure, builders allowed the iron to take its fair share of the burden. This was something which no other generation of builders was prepared to allow before the 1930's when some attention was given to what was then called "stressed skin" construction.

After iron came slate. For a quarter of a century it covered the M-sectioned roofs, at least on the three sides visible to the street. Sometimes the sides of the valley to the internal gutter were done cheaply in galvanized iron.

Until the eighties, when its supremacy was first seriously threatened by the tile, slate was the staple roofing material — more of necessity than by choice, for familiarity soon bred contempt. Joseph Reed, the leading Melbourne architect of the sixties, once wrote: "Under the most favourable circumstances, I look upon slate in the light of a cheap makeshift; but in this sunny climate [it is] especially objectionable. Tiles are a much more artistic and substantial covering for houses." Eighty years later the pendulum had swung to its other extreme and architects were hunting for any substitute for the tile. Slate then became the favourite roof of the romantics, and old buildings were coveted for their grey roofs. Some owners went to the trouble of buying the slates of occupied cottages and replacing them with brand new cement tiles in pale pinks and blues. This transference satisfied both parties, aesthetically as well as financially. But in 1857 nearly £45,000 worth, and in 1858 some £53,000 worth, of slates were imported in Victoria alone. "Countesses", 20 in. by 10 in. slates, sold at £13 5s. a thousand. This profitable market attracted importers and local inventors, who searched for alternative roofing materials. One which immediately presented itself was the terra-cotta tile.

On 7 January 1859, Joseph Curet of Melbourne deposited specifications and drawings for an improved tile at the Chief Secretary's Office and applied for a patent. He obtained it, and sold it for £400 to a group of business men who floated the Patent Tile Company. After early struggles with inadequate machinery the company was able to announce in March 1860, that it had succeeded in producing tiles "that possess qualities for roofing purposes superior to anything yet used in this colony. The tiles are light, cool, durable, indestructible by fire, and pretty in effect."

The first important job for the tiles of the young company was the roof of the Museum for Building Materials.. When they were later asked for testimonials, the architects were more enthusiastic about tiles in general than about the Patent Tile in particular. "I consider these will successfully supply a long desired want," said Nathaniel Billing, a Collins Street practitioner, "when one or two trifling improvements have been effected." J. A. Knight said he hoped that it would make buildings infinitely cooler than slates, which offered very little more heat protection than iron. A. E. Johnston, who had a practice in Stephens Street, remarked that the extra weight would complicate roof-framing, and Francis White added pessimistically that once a tile did get heated it took a great deal longer than a slate to cool.

Conservatism and disappointingly high production costs finally loaded the new company too heavily and it died without the knowledge that it had pioneered the manufacture of what was to become, fifty years later, the universal Australian roof.

There were other early pretenders to the position enjoyed by slates: another patent tile in New South Wales in the sixties, a perforated tile in Melbourne in 1859; ornamental stamped sheet-metal tiles, asbestos sheets, asphalted felts and saturated papers, but none could hold its own against slate until, one day in 1886, the sun glinting in its orange-red grooves, the Marseilles tile arrived in quantity.

It had visited Australia before. Even before the Patent Tile Company's venture, the multi-ridged French tiles had been imported in odd bundles to Sydney and Melbourne.

But at that time, when slate was in its first height of popularity, they could not compete in price. In 1886, after a full generation had sweltered under the close-boarded base of the slate roof, the tile found a different reception. Here was a roofing material which was watertight in the sudden driving rains yet allowed some slight passage of air between the ridges on its surface and the overlapping lips of its neighbours. It was durable and strong. Furthermore it was red, at a time when warm colouring was wanted in reaction to the grey surfaces of the Italianate boom. The brilliant red was considered a perfect foil to the grey-greens of the landscape which Australian cities were then greedily devouring. Houses which could not afford tiles picked up the fashion with terra-cotta frilled ridges on their grey slate or galvanized-iron roofs, or painted their iron red.

Rocke & Co. in Melbourne,[7] a furniture firm, began importing the tiles. Other companies in other states followed suit. In 1908 manufacture in quantity began, developing quickly. By 1910 no other roofing material held a considerable position in Melbourne, Sydney or Adelaide.[8] In 1920 concrete tiles began to appear. Unhesitatingly, their manufacturers made the moulds in the same pattern. Zinc-annealed sheets were used for roofs after World War II. With perhaps a little more hesitation, its manufacturers cut the sheets and pressed them to the shape of four Marseilles tiles, all in one piece. Architects, concerned by the clumsy scale and numerous indentations of the Marseilles tile, occasionally remonstrated with the manufacturers. As a result, the "Roman" pattern, a few simplified versions of the Marseilles tile, a shingle tile (small, flat and rectangular) and the Cordova (Spanish styled, semi-circular or S-shaped) appeared at infrequent intervals. But these shapes were considered frivolous after World War II and there was a nation-wide return to the roof style of the peasant buildings in southern France. The pattern was inviolable, but colour varied considerably. Dark brown terra-cotta, which was the colour of the first tiles made in Sydney in 1788, was now favoured by the smarter houses as a reaction to fifty years of orange-red. Brown made a strong foil to the newly white walls. Red was standard in New South Wales, Western Australia and Queensland. Grey cement tiles were familiar in South Australia. Victoria, also forced to use cement in the terra-cotta shortage, tinted the tiles red and black and a variety of transient pastel tints. Often several colours were blended on the one roof, sometimes in diagonal stripes.

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[7] Later Wunderlich Pty. Ltd.

[8] A "First Impression of Melbourne" noted by Denis Ayre in the Students' Annual *Lines*, 1937: "Wotta lotta terra-cotta".

Early in the 1900's bituminous felt imported from England and the U.S.A. graduated from bay-window tops and balconies to be used occasionally as a main roofing material. When the American Bungalow style demanded low-pitched gables (*c.* 1920), felt was used extensively as sarking under the tiles. It was then manufactured in Sydney primarily for flat-roofed urban buildings. When the Functionalists introduced the flat roof for the home (*c.* 1933), the use of felt became associated in the public mind with the work of modern architects. Builders were still highly distrustful, which partly accounted for the widening chasm between their work and the architects' of this time. Builders only copied the architects' ideas as high as the eaves-line. Then they finished off by reverting to the Marseilles tile.

The left-wing attitude on the seventy-year conflict on roof shape was stated by Nahum Barnet, a critic in the *Victorian Review,* as early as 1882: "To build . . . a steep-pitched roof in a country where snow and sleet are unknown is as incongruous as the adoption of a sou'-wester and ulster as a February costume." The right-wing view was uncharacteristically taken by Robert Haddon twenty years later: "The roof as an architectural feature is always much improved by increased height and pitch." Several generations of ambitious home owners agreed with him.

Certainly the architects who used felt had troubles. There was a story of an owner, taking her first bath in one of Walter Burley Griffin's houses, horrified to see black spots forming on her skin. Bitumen was dripping from the flat roof through the boarded ceiling. Hastily summoned to the phone, Griffin explained that he deeply regretted that nothing could be done. "You will just have to let it drip and drip, until it has all dripped out."

Locally made paper-based felts led many architects into troubles which might have been avoided by the use of thicker layers of asbestos- or rag-felts, or metal sheetings. One of the major struggles of the Functionalist movement was the search for a roofing material which did not require an aesthetically disturbing pitch in order to be weathertight. Corrugated galvanized-iron supplied one answer, but because of its association with country cottages and the cheapest suburban villas, it was seldom acceptable in the restricted social field where the Functionalists worked. Corrugated asbestos-cement seemed slightly more remote from the cottage. Architects grasped the wider gauge (six-inch corrugations), which the manufacturers intended for industrial buildings, and used it on expensive houses. By 1945 it was greatly in demand for housing. At the same time the post-war asbestos shortage made it one of the scarcest of materials and architects were forced to search again. In 1948 they were occasionally drawing on England's aluminium, which arrived in small corrugated sheets and looked like the sheet-iron with which England had started Australia's roofing a century earlier.

There were more or less successful experiments with concrete while it was still a novelty between 1910 and 1930. In Beaumaris, Victoria, in 1912, George Higgins, engineer and contractor, built the first important all-concrete house. He made the roof in a comparatively low pitch for its day, in reinforced dished sections four feet wide running from ridge to eaves. There was no ceiling; the underside of the sloping slabs was rendered. Eventually the concrete moved enough to open small cracks and let the rain in.

At Castle Crag, Sydney, in 1930, Walter Burley Griffin made flat roofs of concrete in the hollow floor design familiar in office buildings: reinforced concrete ribs filled between with coke breeze or terra-cotta blocks. He used flooring boards, face down, for the forming, later re-using the same boards for the floor of the respective room. The roof-top graded from all sides to the centre, from which a wrought-iron down-pipe took the stormwater through and under the house and away. After the slab was poured, the central outlet was temporarily blocked and the roof-dish was filled with a solution of calcium chloride in water. This was allowed to stand for three weeks, by which time it was calculated that the concrete would be cured and thereafter would be resistant to shrinkage cracks. But in fact water found a way through in many of the houses. This sort of thing gave Griffin a name for being poor at construction while his contemporaries, who never departed from the French tile, were rightly credited with seldom building a roof which leaked.

Griffin was one of the few men who seriously tackled and indeed never ceased toying with the problems of a logical roof for Australian houses. Once he found a sound solution in his Knitlock structural system of the early 1920's. He developed a square concrete tile of 13 in. sides, with two lips turned up, two turned down. They were laid diagonally and were light in colour and weight. Each tile weighed about the same as a Marseilles-pattern tile but covered a quarter as much again. As they provided no wind-hold at the sides, Griffin claimed that it would be impossible for these tiles to blow off. This proved correct. He also pitched them at less than half the approved minimum safe angle for Marseilles tiles, and said they could not leak. This proved incorrect. But they were flexible and exceedingly neat in appearance and it is probable that eventually they would have come into general use on medium-pitch roofs had he handled them more tactfully. Even the most conservative Australian builder occasionally looked about impatiently for an alternative to the Marseilles tiles; a Knitlock tile at the same pitch would have served him admirably. But they had gained a bad name by their failure in a test which would have been too severe for any tile. After Griffin left Australia they were used once or twice by Griffin disciples. Then they disappeared.

Insulation of flat and low roofs usually took the form of an air-laden "blanket". As early as 1850, tan was raked over ceilings under the hot slate roofs. Dried seaweed, sawdust, and later the winnowings of the wheat-threshing machines, were also used. After World War I, locally manufactured rock-wool and imported aluminium foil were on the market and occasionally specified by architects for domestic insulation. Extensive advertising of its advantages after 1945 led rock-wool into standard practice for flat and low roofs and into fairly general use under better built tile roofs.

In every period of acute housing shortage from 1788 forward, governments resorted to the importation of completely prefabricated houses, usually from England. Governor Phillip brought with him a portable frame and canvas house which had cost £125 in London and was "neither wind nor weather proof", as he reported in his first despatch home. The governors and leading citizens of each succeeding colony were usually forewarned to bring their "homes on their own backs". In the fifties and early sixties various iron houses were sent from England, and in 1853 the Clift House Works, Bristol, advertised a prefabricated migrants' hostel for Australia.[9] The heavy boiler-plate panels, three feet square and sometimes fitted for windows, were bolted together on the site. They were primarily intended for cheap housing of employees, but there were instances of elaborate, plaster lined models for the rich. In 1855, Alfred Douglas of Geelong, Victoria, found on the pier an abandoned heap of ½ in. boiler-plate wall panels complete with windows, columns and elaborate decorations in cast iron. Somehow the plans had been lost with the owner's name, but Douglas fitted the pieces together into one of the city's most admired villas, "Corio".[10]

In the seventies at least one American timber house was lifted across the Pacific; this was done by a Melbourne man with a taste for the American Colonial and its fine woods and craftsmanship. In the eighties small terraced workers' cottages were imported from Birmingham in the form of panels of stamped iron-sheeting. Ironically, the practice was revived on a large scale in 1949. Faced with a bad housing shortage, various Australian governments found it expedient to import houses from European countries, which had been so much more seriously disrupted by the recent war. Numerous private importers offered rival houses from England, Scandinavia, France and other Continental countries, in wood, aluminium and steel.

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[9] Built to a plan "suggested by Mrs. [Caroline] Chisholm", it accommodated 72 in Gothic wood and iron (Print in the National Gallery, Melbourne).

[10] "Corio Villa", thesis by G. E. Drinnan (Architecture Library, University of Melbourne), 1949.

Australia's problem at this time was a housing shortage pursued by a manpower shortage in a vicious circle. One of the first and biggest import schemes was promoted by the Victorian government in 1948 to bring workmen with their own houses for the state railways. The project was called "Operation Snail", thereby resurrecting the century-old joke. It differed from all previous import schemes in that the English manufacturers followed designs from Australia. These were done, with fine attention to detail, by Yuncken, Freeman Bros., Griffiths and Simpson, and Baxter Cox, architects of Melbourne.

Australian-made prefabrication was not developed to any extent until World War II. Then a few comparatively small projects appeared in answer to sudden housing demands in new defence factory areas. Encouraged by wartime experience, several large-scale projects were launched at the end of the war. Most of them employed steel extensively. Government and private schemes were all on the same lines. The Beaufort Division of the then Department of Munitions developed in Melbourne a house using pressed-steel sections for floor joists and roof trusses. Wall panels were 3 feet wide, made of channel and angle framing members, sheeted externally with flat galvanized-iron sheets spot welded to the frame. The panels were bolted together with a bituminous felt sandwich filling. Internal partitions were framed in light pressed steel. The roof was covered with 3 ft. wide panels of zinc-annealed ribbed sheeting. Other finishes were orthodox.

The Commonwealth Experimental Building Station in Sydney proposed a system using commercial rolled-steel sections instead of pressed steel for framing. It covered the walls and roof with pressed-steel or duralumin strips. There were similar commercial projects. Armco (Australia) Pty. Ltd. developed a system it called "Armcolock", adapted from an American method using interlocking pressed-steel panels for walls and roof. A number of other private firms used steel sections in various forms to provide the frame in place of timber for otherwise orthodox brick-veneer or board construction.

Partial prefabrication in various degrees and of various kinds was operated by public housing authorities in all states after 1945. The biggest developments were in Victoria, first in concrete and later in timber. In the former case the walls were prepared, complete with door and window frames, ventilators and fire-places, in a huge unwanted war factory at Holmesglen. Concrete stumps were erected on the site; the walls were brought on trailers and lowered into place. In the latter system, 'Duplex' timber houses were built in two pieces at the factory and the halves were joined on the site. Other states had modified systems of factory construction for walls. The South Australian Housing Trust, which normally worked in brick, had one group of timber-framed cottages with factory-built walls. Tasmania made a few 8 ft. by 4 ft. wall panels for country houses in the Agricultural Bank's Hobart factory. Usually the state housing authority factory did not build the harder parts — the plumbing and the roof. These were left to orthodox construction on the site.

A few enterprising small-scale prefabrication businesses are now operating successfully. The basis of most of their houses is conventional timber construction. By pre-framing and finishing sections of the house they manage to gather much of the labour under a single factory roof. The size of the unit prefabricated varies in different systems from a wall panel to half a house. With the possible exception of these, the houses of the 1950's are still put together in much the same way as those of 1800; laboriously with hammer, trowel and saw on the building sites, delayed by each shower. Nevertheless, even these primitive methods could be made into big business.

The real money in the building trade was not to be picked up on suburban streets; it was piling up in the commercial and industrial areas. But there were always a few men looking for a fortune in the suburbs. In every period of prosperity somebody with a practical outlook became impatient with all the double-handling required to make one house. The thought was to save buyers trouble, if not money, by combining in one office the services of builder, financial institution, land agent and, in some cases, architect. Such business enterprises sprang up frequently in times of building shortage and disappeared as quickly in depressions. From World War I forward, the majority of successful builders in the small-house field had comparatively small businesses, operating around £10,000 worth of projects at a time, and subsisting almost without capital on the hand-to-mouth finance provided by each operation. But some speculative builder-designers who bought estates whole, cut them up into the customary 50 ft. units and built batches of houses at a time, were able to amass considerable capital.

One who developed the business potential of the small house into spectacular proportions was Albert Victor Jennings of Melbourne. Starting at the end of the depression in 1933, Jennings was building large estates when World War II began. He had a 64-house estate at Murrumbeena and the "Beau Vue" estate of 94 houses at Ivanhoe. Streets and services were designed and built by his organization. The approach streets twisted picturesquely round the hillside. Service lanes at the rear carried the wires and burden of the work. During the war his company, A. V. Jennings Construction Co. Pty. Ltd., grew on defence building. Each year after 1945 it built hundreds of houses for the Victorian Housing Commission and took on new contracts in other states. By 1950, Jennings employed more building labour than any other contractor in the Commonwealth. He had many millions of pounds of housing contracts behind a business which included timber mills, joinery shops, kiln-drying plants, road-making teams, various minor factories, and an architectural office.

The Australian finish was a rough and ready finish, in factory manufacture as in custom-built furniture and houses. Immigrants from older countries never failed to be surprised and shocked at the rough edges on Australian production. Australian joiners probably used more putty per head than those of any other country. A piece of wood in a good Australian house could be relied upon; it would be sound, reasonably free from shakes, gum-veins, white ants or borers, and of ample proportions. But it would not necessarily be planed to the smoothest surface.

A splinter or two caught under the skins of immigrants from the old world. It was said that "near enough" was the Australian's motto, diametrically opposed to the hyper-civilized world of such craftsmen as Eric Gill ("Ultimately there is no happiness in a world in which things are not as good as they can be"). But near enough often had to be good enough during the pioneering days, and even in the twentieth century many tradesmen could not break the habit. They seemed to look upon their own work as transient, as though they thought only of making their fortunes and returning to the "Old Country". While this in fact was the aim of the pioneers, nothing could have been much further than England from the day-dreams of twentieth-century Australian artisans. The philosophy of "near enough", manifest in the buildings, penetrated deep into Australian society. It indicated a distaste for extremes and an impatience with high precision (for precision's sake) which sometimes served Australia well. At any rate, no militarist political philosophy could ever find a foothold and no Australian could ever quite restrain himself from laughing at a brigadier.

13

Insects, Children, Animals

INSECTS influenced the shape of the Australian house. Some, like the white ant and the Lyctus borer, worked quietly and invisibly until a little shower of yellow dust or a sudden collapse indicated their presence. Others, like the mosquito and housefly, were less dangerous and more objectionable. The former type influenced structure in minor ways; the latter affected planning to a major degree.

Termites (white ants) lived in the ground in nearly all parts of Australia. Their potential danger to a house varied from place to place, but only in the Melbourne metropolitan area and the immediate environs south of the Dividing Range was it unnecessary to take precautions against them. Adelaide suffered most among capital cities. There was no known satisfactory method of eradicating termites once they had become established in the building. It was essential to stop them before they constructed their galleries over the surface of brick walls or stumps to the floor timbers. Various methods were used throughout Australia: spraying or brushing timbers with preservatives and poisons, poisoning the ground, covering the sub-floor soil with cinders or lime, but the effectiveness of these methods decreased with age. The system more generally approved was to obstruct the white ants, which could not build galleries downhill, with sheet-iron caps over all foundation piers, walls and pipes. Although so simple and cheap, this method was sometimes scrapped or skimped. Ants discovered the smallest openings left by careless builders and worked up into the structural timbers of the house.

Termites, being frustrated by the invisible addition of stump caps, had no influence on the structure or plan of the house. It was often said that the tall stumps of the North

Australian house were provided so that the occupier could check the activities of the ants, but most Queensland builders agreed that the ants were only a minor consideration among the reasons for their elevated floors. Similarly, the borers which attacked some hardwood framing and joinery could be countered by various chemical treatments. Timbers could be dipped at the mill or, less effectively, sprayed on the building site. In either case the structural shape remained unaltered.

Houseflies and mosquitoes, on the other hand, affected the development of design. In most parts of Australia they made the day or night, according to their habits, unbearable. Unscreened openings were not possible in summer. An unscreened service porch was unusable in most country districts. Flies and mosquitoes were found all over Australia, but the latter generally grew rarer and the former more plentiful as the home-builder moved south. Flies preferred the hotter, drier climates of the southern inland districts. High humidity favoured fly disease and low temperature reduced their activity and retarded their development.

The use of mosquito nets at night was essential in northern areas. The cotton net was draped over the whole bed and was tucked under. There were several decorative treatments. In the nineteenth century a four-poster canopy hid the raised net by day. In the twentieth century the net was usually bunched at a single point of suspension above the bedhead and hidden by day in a fancy-worked bag of individual pattern. Later the nets were pastel tinted. The net practice declined south of Brisbane and disappeared in the latitude of Sydney. Woven-wire flyscreens, on the contrary, were more familiar on windows and doors in the southern capitals.

In central New South Wales the traditional verandah-enclosed bungalow was often entirely screened at the verandah edge. The wire mesh was hung on a line of slim posts fixed two or three feet apart. From the outside on a bright day the screen seemed opaque. It hid the careless elements of the doors and windows in the wall and made the square house an unintentional model of architectural simplicity.

Flyscreening did not usually so improve appearances. In the suburbs of the southern capitals it was a constant concern of architects, for it obstructed the view from the inside and was damaging to the effect of a simple window from the outside. It virtually limited the size of opening panes to three or four feet in width. In large sashes it required reinforcing bars which further complicated the window. Various devices were made by inventive architects and commercial manufacturers. Some hung the flyscreen sash outside the glass, some inside. Some made the screen removable for winter months, some fixed it permanently. There were screens which rolled into boxes above the sash, others which slid the length of the window and could be placed opposite whichever sash was open, others permanently built-in with a small trapdoor through which the glass sash could be operated. The most familiar, however, was made for the double-hung window. Fixed under the upper sash, it screened the opening when the lower sash was raised.

Childhood was largely an outdoor state, even when the cities developed and the playing paddocks were overgrown with buildings and fences. From earliest infancy, the weather and the private garden drew the child outside the house. The infant left the pram earlier than his European contemporary. He was playing with his woolly toys and saucepan lids on the grass, confined only by a portable wooden pen, at an age when Europeans were still swaddled, or tucked firmly in a pram. And through the twentieth century, childhood gradually became freer and easier. There were fewer children in the family and more money and time to be spent on each of them. More attention was paid to their special likes and dislikes. They began to join more frequently in adult activities and to have special entertainments devised for them. Saturday afternoon at a children's matinée in the suburban picture theatre replaced Sunday's church-going as the principal week-end outing. Freudian theories led some parents to take elaborate precautions against rearing complexes and frustrations. In the 1920's the division between adults' and children's domestic pursuits grew less pronounced. Free-expression schools and kindergartens were opened in the thirties — notably Preshil and Koornong in Victoria. At the latter, founded at Warrandyte by J. C. Neild in 1939, study was voluntary. This advanced venture collapsed within seven years for want of public support, but even in conservative schools the pupil now had more to say for himself and the cane stayed longer on the top shelf. Novelists, who in the nineteenth century had told heart-rending stories of some cowed schoolboy, now turned their sympathy to the tormented schoolmaster.

After World War II, department stores and magazine publishers, taking the American lead, set out to weave a strong spell of "glamour" around adolescence. Special products and store departments were provided for the teen-age girl, who was now given enough of her father's money to make her custom appreciated. "Coke", bubble-gum and fashions in attire were adopted in New South Wales some three years after their American appearances and were picked up a year or two later in other states. Teen-agers sometimes held parties in their parents' homes, with loud radios and gramophones, and voices shouting uncertain Americanisms with an Australian accent. But Australian parents were never as enthusiastic about the extreme American interpretation of childhood freedom as were the department stores, magazines and the children themselves. Nevertheless, the gradual elevation of the rights of children had several effects on the house. It was one of the major influences in the breakdown of the two-parlour system. Instead of being locked out of the formal front parlour, children now were often allowed a run of all the house; the combined living- and dining-room developed, glass doors separating the two sections. On winter nights the doors were shut and the children did their homework on the table while the father read the paper by the fire. The task of tidying such a room for dinner guests was in the mind of housewives who bundled the children into the kitchen. The central kitchen table, which had been the preparation board for centuries, now became cleared for family meals as the side cupboards grew wider work-tops. Then the table moved to the wall and was built-in with side benches. The living-dining-room meanwhile had lost all but a psychological division. It was kept as clean and neat as the old prim parlour behind its locked doors. Now mother tried to deter the children from entering it by logical persuasion.

Concurrently, the children's bedrooms had been receiving more attention. They had been growing smaller, as all other rooms in the house grew smaller during the twentieth century, but they were given better positions and fittings, the girls' provided with glazed chintz and a kidney-shaped dressing-table, the boys' with big cupboards for the growing collection of sports equipment and mechanical toys.

A few years of living, after 1945, in a house where the children and the children's friends were never really out of earshot, convinced many parents that open planning had its limitations. Some began to wonder if this first move to free the standard plan of its rigid little compartments — this combination of formal and informal spaces — should have been the last move instead. A new grouping of rooms was sometimes suggested. This put the parents' bedroom with the living-room and segregated a self-contained bed and play section for the children. At a Modern Home Exhibition in Melbourne in 1949, final year students of architecture at the University of Melbourne exhibited ten model houses. Eight of the plans were based on a division of the house into parents' and children's sections, each with their own living, sleeping and bathing facilities. The entrance section and kitchen were shared. This idea appealed, at least theoretically, to many tired parents who examined it.

Beyond observing the essential condition that servants' wings were to be separate, nineteenth-century architects had had few theories on "zoning", as the twentieth century described the process of grouping different activities in a plan. Automatically in most cases they had differentiated and separated in some way the day and night activities. Thus, bedrooms and bathrooms were upstairs, and sitting-rooms, dining-rooms and kitchens were downstairs in two-storey houses, while in the larger, rambling single-storey plans the bedrooms took a separate wing. The same division was made more self-consciously and obviously in the twentieth century. Living, dining and cooking were grouped, beds and bath were grouped — the two sections meeting at their service ends. L-shape, U-shape, T-shape and rectangular plans all followed this principle.

The new idea of the architectural students, apparent also in a few recent houses and projects of architects' houses, provided segregation of age groups, not of activities. This was a different zoning theory of considerable significance. Houses designed on this principle could have little in common with those of any other period.

Of all members of the household, the dog was affected most when the family moved from the European to the Australian town. From a humanized, sentimentalized indoor life with no real freedom, he was given the run of a quarter-acre lot and expected to return something of practical value for his existence. Being a good watch-dog would be sufficient. (Perhaps detached dwellings seemed more vulnerable to burglars than the terraces of England.) He seldom slept indoors. He was given a kennel, sometimes elaborately made in the image of the house. Often enough he would not be allowed indoors at all — soiling the carpet with his muddy paws. He saw less of the family and more of his fellows in the street, which he roamed free of a leash, healthier, and happily unaware of the ever-present menace of the municipal dog-cart.

The cat's life, on the other hand, changed little or not at all from England to Australia. The cat saw to that.

14

Architects, Clients, Critics

THE influence on Australian home life of architects, as a profession, was not great. The few architects who were in politics at various times were not noted for radical proposals. The few who helped municipal officials to frame building regulations from time to time seldom anticipated or encouraged change. Regulations were made to secure for the poorest houses standards of health and structure which were in common practice in the average house when they were framed. They varied only in minor details from state to state and from decade to decade.

Most big architectural offices touched the domestic field only as a favour to a managing director of a large establishment for which they were building or to encourage a junior partner who brought in the job. Big offices normally redirected to the office of some beginner any home-seekers who wandered through their doors. Few architects sought to specialize in houses. Most opened practice with a few small domestic commissions but as rapidly as possible turned to factories, shops, offices or churches — any of which were more likely to promote professional success. The administrative and supervisional work entailed in an average-sized house, done thoroughly, was about the same as required for a small factory, which would cost perhaps four times as much. Architects' fees being payable on a percentage of building cost, factories and other commercial buildings involving repetition of a unit were the most profitable.

The few architects who specialized in domestic building were either semi-qualified men operating from the suburbs, or had made such a name for themselves with prominent people's homes that they could command fees higher than the normal rate.

There were many of the former type. At frequent intervals through each century sensitive laymen, appalled by suburbia, advocated more employment of architects; but the problem was not quite as simple as that. Dozens of legally entitled architects in every state and every generation had no real training, interest or ability in creative design. In effect, they merely translated what was essentially the owner's own design into terms which the builder could comprehend. They also acted, often with honesty, as agents for the owners in dealings with the builders, and supervised construction. They had no influence on the course of popular fashion; they were instruments of it.

There were not many of the latter type — three or four prominent domestic architects per generation was the most that the biggest city could support—but among their number were the men who promoted the building progress of the nation. These men indirectly influenced the home life of families which had never heard of them.

Most imaginative experiments in building were made in the domestic field. Expensive houses led the shops, offices, factories, churches and theatres — in something like that order. Finally the small house of the builder-designer adopted each move some twenty years after it had first been made.

Most of the irresponsible fashion changes were also promoted by house designers. Through the nineteenth century churchmen were happy with Gothic, public builders with Renaissance. Commercial designers, their eyes darting wildly in search of novelty, were yet too timid with their clients' money to take first steps into entirely new territory. The style parade was bustled along by fashionable house designers.

The domestic architect differed from others in that he tended to remain longer at the practice of architecture. Those engaged in work on larger structures were forced before long to concentrate on one facet of an architect's work, to be one cog in a large office of separate departments. The principals of such offices inevitably became managing businessmen. Then they seldom ventured near a drawing board or a building except in an official party on opening day. But domestic architects frequently had little help, and did most of their own drafting and all their own supervision.

Most architectural offices were edged by the circumstances of their practice into specialization in some class of bigger building, but despite all economic influences the keen designer never gave up houses altogether. This branch of practice would always remain the most personal and productive medium for architectural expression. Resistance to anything whose popularity had not been proved was too strong in expensive buildings. The architects whose names lived in Australia's history were mostly the builders of houses.

The architect could not afford the lonely soul of the painter or musician or worker in any other inexpensive medium. A student architect could and did frequently produce in sketch-form magnificent, broadly-conceived schemes. He would then criticize his elders in practice for their timidity and muddled thinking. But between his sketches and the finished buildings of his future practice there were years of disillusioning contact with ostentatious or hidebound clients, unsympathetic financiers and unintelligent or stubborn builders. He later realized that the practice of the art depended quite as much on his ability to convince others of the validity of his plans as on their actual validity. Architects who had not this verbal ability often remained in the position of chief designer in somebody else's office while their more articulate contemporaries won sufficient commissions to permit them to open private practices.

Many a potentially creative architect was buried in the designers' department of a large architectural firm, frustrated perhaps, for he was not expected to produce original work. He could hardly do this, by the nature of the job, no matter how respected or protected by a well-meaning principal. He did not meet the boards of directors who argued over and amended his plans. He could only talk through the compromises of his principal. In any aesthetic matter he was asked only to display the current conception of "good taste".

In domestic work it was not so essential to be an astute business-man to convince one solitary client that a sound plan was the best for him. For this reason there was always a thin trickle of good houses built outside office hours by the disappointed designers of the big architectural firms and the government architectural departments.

The first architect was Daniel Dering Mathew, who designed, among other buildings, an austere Georgian two-storey house for the Secretary, in 1813. This was claimed as the first building erected from plans prepared by an architect in Australia.

The second architect became the best known of all who ever built in Australia. He was Greenway, Governor Macquarie's architect, master of a late-Georgian mode which was later known as Old Colonial.

Francis Howard Greenway was born in 1777 and trained in London. He was disappointed in early practice in Bristol, went bankrupt in 1812, and was caught trying to rob an unpleasant client of £250 on a forged contract, a capital offence. Influential friends had his death sentence commuted to fourteen years' transportation. He arrived as a convict at Port Jackson on 7 February 1814, carrying a letter of introduction from Admiral Arthur Phillip to Governor Macquarie, who had been seeking an architect. In December 1814, he started practice as an architect and planner, offering his services in laying out estates. He worked for Macquarie on many proposals – a town-hall and market house, a lighthouse, fort, bridge, churches – all in the grand scale on which Macquarie envisaged the future of his infant city. In 1816 Greenway was appointed official civil architect and assistant inspector of public works at a salary of three shillings daily. Macquarie could "guarantee his scientific skill, judgment and superior taste". On 16 December 1817 he was emancipated.

The story of this extraordinary architect was not recorded till M. H. Ellis in 1949 published his comprehensive biography, dispelling incidentally most of the gilded romance which wishful-thinking admirers had woven round his life. Ellis wrote: "His imagination was a thing of flames which blazed brilliantly and died. Indolent himself, his mind flaring up in bonfires of inspiration followed by ashy smoulderings which often came to nothing if execution were left to himself, he yet raged at the sloth of others. He could not brook control. He met patronage or haughtiness with accusation and insult. He could not differ without quarrelling and he could not quarrel without imputing base motives and stupidity to his opponent and treating him to . . . [a] tongue lashing . . . " Without integrity in his social or business dealings, "all his criteria were artistic".

Greenway's best-known works were the Hyde Park Barracks, the Macquarie Tower and Lighthouse, and St. James's Church, all in Sydney, and St. Matthew's in Windsor. The qualities presented in these buildings — monumental scale, balanced proportion, simple classic dignity — were to be found in many houses built about Sydney during Macquarie's rule (1809 to 1821). In his time the population increased from 11,950 to 38,778, but the sheep population increased from some thirty thousand to a quarter of a million. Wealthy new settlers followed the sheep along the Cow Pasture Road from Parramatta to Camden, before the mountains were crossed, then on to the rich inland plains. They took big grants of land and built their stores, sheds, servants' rooms and their expansive homesteads in little scattered oases of civilization. Their houses had the architectural character of the public buildings, but in addition a plan form new to the late-Georgian style. They were essentially designed for Australia. These houses rather than the public buildings were evoked in the minds of future generations when the term Old Colonial was mentioned: the low white, shuttered, sheltered homestead spreading long wings in a clearing of the Australian bush; cool, broad verandahs crowded at their edges by luxuriant shrubs; the textures of warm brick, white paint, grey shingled roof. These were the significant things in Macquarie's legacy to Australia's home life.

Greenway's temperamental inconstancy eventually destroyed him. In 1821 he quarrelled bitterly with Macquarie, his greatest admirer, patron and protector. Macquarie was recalled and Greenway was dismissed. He tried to settle down with his large family and a small private practice. The work thinned out; the Bristol story seemed to be beginning again, even to the extent of a second possible forgery discovered by his biographer. He managed to struggle on for fourteen years. In 1832 his wife died. Later in the same year when a new governor, Sir Richard Bourke, demanded of the Home Government a fitting residence, he could find "no person here in whose professional experience as an architect I can place any reliance". But he sent home a drawing of the elaborate stables designed by Greenway as a style guide to Edward Blore, later Queen Victoria's architect. Blore prepared the drawings in England for a Government House near the stables, following Greenway's uncharacteristic excursion into castellated Gothic. In 1835 Greenway was advertising occasionally in the *Sydney Gazette*: "Francis Howard Greenway, architect, arising from circumstances of a singular nature, is induced again to solicit the patronage of his friends and the public." There were few friends left and the public had forgotten his name. He died in September 1837, protesting against fate to the end.

Contemporary with Greenway were some dimmer personalities: James Smith, who arrived as a free settler in 1815, built Liverpool Church, became bankrupt largely as a result of Greenway's adverse report on the building and remained his lifelong enemy; Henry Kitchen, who was sent out as a possible Colonial Architect immediately after Greenway's appointment and remained his lifelong rival; Standish Lawrence Harris, who replaced Greenway and vilified his works until he in turn was replaced within the year.

Mr. J. T. Bigge, a Commissioner of Inquiry appointed to investigate Macquarie's extravagance, described Greenway in his report as having been convicted because he "concealed his effects in bankruptcy". M. H. Ellis, unearthing the real story 130 years later, pointed out that this statement had confused several generations of Greenway admirers. After Hardy Wilson had awakened architects to the Macquarie heritage in the 1920's, Greenway was unquestioningly idolized. Even Bigge's charitable explanation of his crime was improved. He had been deported to Australia for concealing "beloved effects", wrote Wilson. He was popularly credited with almost every extant building of his day, and with some spreading, verandah-enshrouded homesteads built several years after his death. It became accepted that Greenway was the father, not only of good building in Australia, but of good building for Australian conditions. Yet the research of men like Ellis, who isolated Greenway from his times, made it appear more likely that he and his contemporary architects were less inclined to be influenced by the environment than the simple builders. Trained in the practice of their art in the strict, if sensitive, school of Georgian stylism, they were not inclined to let a mundane thing like a hot sun or a cloudburst disturb the intellectual process of their designing. None who studied his work disputed that Greenway was a master of scale and proportion, did not give credit to his restraint, his command of concentrated ornament, the simple dignity of his form. He was a sound planner and structural designer. The clarity of his expression and directness of his approach were never excelled. Indisputably he was a great English architect; but of all schools of Colonial work, Greenway's was second only to that of the eclectics of Victorianism in showing resistance to adapting the English model for Australian conditions. The Australian climate and materials reacted more vigorously upon the Georgian image in the minds of less erudite builders who made the majority of the homesteads.

No other state had a Greenway. The only other pioneer who approached his class, some fifteen years later, was Russell of Melbourne. In 1832, Robert (Robin) Russell (1808-1900), surveyor, arrived in Sydney. In England he had served an architectural apprenticeship under John Nash, who reportedly had entrusted him with some repairs and alterations to Buckingham Palace. At the end of September 1836, he was sent to Melbourne "to chart the shores of Port Phillip, trace the courses of any rivers and plan a series of section lines". When he got there he found the horses had not arrived. His commission could not be fulfilled, but he found other things to do. He painted the landscape in careful, light little water-colour sketches. He carved a few cameos. To fill in spare moments he planned the town. Next year Bourke arrived and approved the plan which Hoddle later pulled into shape. Russell stayed on to build the first serious architecture in Port Phillip, including old St. James's Cathedral. He died at Abbotsford at the age of ninety-two.

About a hundred years after Greenway, when another architectural revolution occurred, as significant as the one he prompted and more important than any of the intermediate style shuffles, it was again a domestic architect who raised the first flag.

Early in the twentieth century Harold Desbrowe Annear (1866-1933) of Melbourne broke the chain of his contemporary architects plodding in their slow circle of historical styles. At the end of World War I he discarded all styles and grasped the precepts of Functionalism, then a young and unpopular movement in Europe. He saw logic, honesty and sound common sense in the flush wall, the plain window and low roof, in the unadorned expression of function and structure. In 1918 he built a large house in Orrong Road, Toorak, "Broceliande", the first Functionalist building in Australia of considerable dimensions. By the 1950's standards its windows were small; in other respects it was timeless. Its big slabs of plain roughcast wall were given no decoration other than the thin shadows of the surrounding gum trees. Its windows were gashes in the walls, groups of sliding frames located with regard only to the internal plan. He followed this up with another of similar size and character, "Inglesby", in Caroline Street, South Yarra, with a number of smaller homes in the Melbourne suburbs and at the fashionable holiday resorts.

Annear himself believed domestic building to be the most important department of all architectural endeavour. In it he saw the greatest scope for the inventiveness and love of gadgets which so filled his mind in his younger days. Every new commission for a house was an invitation to experiment with a new device for a window or a cupboard or a detail of construction. "Real architects have always been and must be inventors", he once told students, "in mechanics, in form, in tone and in colour." His own inventiveness was stronger in his early days of practice. Having devised, about 1905, a workable window sash which slid into a cavity in the wall above, he was content to re-issue the detail on almost every subsequent job. He had also found two chimney types which satisfied him. The more spectacular included room ventilation stacks on each side of the central flue. The flue was carried up a foot or so higher, giving a stepped skyscraper silhouette to the chimney top. This feature identified his buildings for nearly thirty years. One of his most successful details was a "one-slab" door — Australia's first deliberately flush door. It was made of wide Australian hardwood boards, butted together and held by ledges dovetailed flush into the back. He used it first in 1916.

A realist who liked to live well, he was never above judicious pandering to a well-to-do client. Over-decorated mansions in a style which he believed to be Georgian appear at intervals along the tortuous path he travelled. Even for these big houses he invariably looked out the old details of sliding window sash and stepped chimney. The "Georgian" flavour was no more than icing on the front. The sides and back were unpretentious and satisfying to the generation of radicals which followed him.

Many architects believed that to design backgrounds for other people's lives one must first know how to live. This led some into rather disastrous essays in amateur philosophy, more or less based on theories which had proved correct for buildings. Annear once embarrassed a students' meeting with this advice: "Live over the shop. This is, to yourself always be an Architect, not only when in your office but during all your waking moments, even when you are making love to a girl." In saying this he was not merely trying to ingratiate himself with the students, as some lecturers will. He persevered: "Girls love doctors and lawyers and policemen, but prefer architects to make love to them. Your shop is in your hands and your head. Love your work, and girls will love you." To the accompaniment of sickly grins from the students, he finished: "In your youth have plenty of girls. In your middle-age increase the number, and in your old age flatter them, for it is all you can do. You will always be in difficulties, but you will die happy."

Gratuitous comments on the same theme appeared in an article he wrote intended to woo potential home-builders for architectural service: "It was interesting to be told the other day by a very cultured woman that she had lost all respect for men. Now this is exactly the last thing a man wants from women. He asks care, attention, flattery, service, and — themselves, but not respect. All the respect he wants he will look for from his fellow males, for without it he could not continue to live as part of a community."

Annear's approach to building was less complicated than these comments suggest. In 1922 he designed a holiday home of five basic rooms fitted into a rectangle. The structure was planned for week-end work by an amateur. It was basically of 4 in. by 2 in. timber, set out on a 2 ft. module horizontally and vertically. The frame was lined on the inside only, thus exposing a squared grid of oiled timber externally. Windows and doors were worked in to modular sizes. The roof was low-pitched in galvanized iron.

There was nothing negative about his Functionalism. He was not content to strip off the Queen Anne trimmings of the period in which he began building or merely to straighten the tortured silhouettes of the plans. He substituted genuine creative thought. His plans were simple, generous, enthusiastically direct and to the point. Long before he expressed these qualities externally with plain walls and flat roofs, he was developing the principle of open planning. Between 1900 and 1918 he built many houses in Heidelberg and Malvern with rectangular plans and big uncluttered rooms. Externally, he roughcasted the timber frames and applied various odd half-timbered effects. These were a welcome deviation from the current *Art Nouveau* standards, but were generally of more interest as a novelty than as serious architecture. But inside some of the houses, such as the one he built himself at Heidelberg, he developed plans as flexible and open as those of the better houses others built fifty years later. In his own home, for example, he used sliding glass partitions and chunky fire-places to divide a large living-room, some thirty feet in each extreme dimension, into four fluid sections — dining, living, inglenook and breakfast alcove. He also added a glass wall to a sun balcony and skewed one section of wall to catch more of the north sun. In other houses he set off great general living-rooms—fifty and sixty feet long — warmed by huge open fire-places up to six feet in width.

Desbrowe Annear was without taste; he was innocent of it. In his inventive years he had no need of it. The proportions of his buildings made his more cultivated contemporaries shudder. He would think nothing of piercing a wall for a new window at the last moment if the room behind seemed darker than he had anticipated. He had never studied the external walls: there was no important premeditated pattern to upset. He was above proportions, finesse and refinement; he had the strength of concept and clarity of expression which made niceties of proportion irrelevant. "Taste", he once scoffed, "is a capacity for making bad mistakes. It is based on self-flattery. Born of it we have houses that giggle and doors that simper. We enter saccharine interiors where all furniture talks loudly and the carpets quarrel with the hangings because they are matched. That is the best that taste can do!"

At a Victorian Architectural Students' Society meeting one evening shortly before his death, he talked about the "millinery of architecture", "the habit of hiding faults with elaboration of ornament, or, worse still, with lines of slight relief so little that they have the effect of being apologies for any thought at all." As far as he was concerned the idea was everything. As a student he was much too impatient to get on with the job of living and building to devote much attention to the study of historical building styles.

"Every architect ought to learn to draw", he counselled students later in life, directing them to the tuition of Charles Wheeler and William McInnes at the National Gallery school, but he had had more important things to do in his own youth when his sisters were being taught there.

It was not necessary for Annear to be able to draw. It was not important if he knew little or nothing about the period styles which he sometimes nominally adopted in later life. He was a man of ideas, and he brought them to Australian architecture at a time when the need was desperate.

The character of architectural practice was consistent through Australia's history.[1] The pioneer architects settled down to practise in much the same way as their descendants 120 years later. Perhaps some of them advertised a little more obviously, but most waited politely for commissions from intending builders. They prepared sketch designs, working drawings and specifications, even the wording of the specifications being largely unchanged by the 1950's. They called tenders of the available builders, supervised erection and submitted professional accounts, in guineas, to their clients. These clients fell into three principal classes. Firstly, those who knew what they wanted and were consulting an architect only because they believed scale plans were essential and knew no cheaper way to acquire them. Secondly, those who knew what they wanted, but believed the architect could add the "artistic touches", as they would say. Thirdly, those who came without prejudice, and anticipated and rather enjoyed being bossed by a determined, experienced man. The type of client did not make much difference to the eventual character of the house if the architect was either inept or extremely self-willed, but many architects were inclined to temper their approach to each problem with their impression of the sort of house the client expected.

When Hardy Wilson was busy resurrecting the idea of architecture as a pure and expressive art form in the early twentieth century, he once gave advice to clients. If they desired that their proposed home should be a masterpiece he suggested that they should select an architect "in whom they perceived a brilliant artist [and] should say to him 'Sir! Kindly build me a house. Here is my card. Good morning.' Not another word." This approach might have led to a masterpiece, but also, possibly, to an inconvenient plan for such a trusting client. Most architects would have called him back for a discussion of his family's living habits. During the ensuing conversation, an astute client who really wanted a masterpiece might have examined the man for the qualities which might produce one. He would not be looking for dexterity, the ability to lay a brick or to drive a straight nail or to draw fine sketches or neat working drawings. The architect would be able to find other men with other abilities to whom he could safely deputize these parts of the building operation. The architect would need a certain grasp of the factors which made for rigidity and dependability of structure, but he need not have the mathematical ability of a structural engineer or the enquiring patience of a research scientist. He would require native ability as an organizer of men, but he need not be in the managing-director class. He would need to be able to organize things efficiently for human use, but even in this capacity he did not require the prowess demanded of, say, the town-planner.

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[1] About fifteen years before Australia's colonization, in the early 1760's, "the architectural profession, very nearly in the modern sense, did at last exist . . . the professional gentleman-artist-architect had arrived." — John Summerson, *Georgian London* (London 1946).

What was essential, however, was the ability to organize the life of men and the operation of things in visual terms. This quality was given to some men who were incapable of creating with their own hands and was denied other men of outstanding manual dexterity in some other field of art practice.

The architect also needed more than average enthusiasm — to the extent that he would take any idea, good or indifferent so long as it was the best that presented itself to the current problem, and, having developed the idea through every detail of the building design, would nurse it through to conclusion against all opposition.

One of the first Australians to express this requirement of architecture was Robert Haddon (1866-1929). "A building should be thought out," he said, "not in plan, nor in section. nor in elevation, but as a whole, a single entity." The idea that the parts of a building should be integrated, bound to the one central theme, was one of the many simple truths which had been hidden under plaster ornament in the Victorian era. As early as 1903 Haddon advised students to "thread something through the building, like one finds in great music and great painting — a touch of life that makes the whole akin." This was easier to advise than to realize and his own buildings in Melbourne were more notable for original, symbolic ornament than for cohesion of their parts.

But at the very least he was the first Australian designer with the courage to build a wall, when occasion demanded, with neither window nor ornament to break its plane. "Never be afraid of simplicity," he said; "let Nature do all she can with her sunlight and her shadows."

Not all architects in Australia in those 150 years possessed all the recommended attributes in abundance, but however far they drifted from the drawing-board and the exercise of their art, managing practitioners always retained more or less secret aspirations. They tended to patronize art groups and join Bohemian clubs, where they could be distinguished by the cut of their suits. Some architects carried their design consciousness to their own clothes. Minor fashions in men's wear such as the yellow tie, the bow-tie, the tweed suit for city wear and variations in the length of haircut and the shape of moustaches were pioneered in respectable circles by young architects. But few went to the extent of John Horbury Hunt of Sydney, who insisted on designing his own hats and boots.

Before the official advent of the Industrial Designer, architects often had to do his work for themselves if they wished for consistency. Not only clothes were out of keeping with their buildings; mechanical equipment, door furniture, cupboard clasps, light fittings, chairs, tables, curtains and crockery all offended in varying degrees. There was hardly an item of domestic hardware in everyday use which had not been designed at some time by an architect to answer some specific problem on one of his commissions. Perhaps because of professional scruples, perhaps because of poor business acumen, he would not patent the device. But the manufacturer would edge it into the market and a generation later it would be in general use.

Although few home-builders expected or wanted their new house to be a masterpiece, probably every architect at some early stage in his career had visions of creating one while he noted down the instructions of a wealthy client. The occasional architect who always retained the desire to produce a masterpiece created his own difficulties, for the solutions of which he was not paid. He had secret problems unknown to the owner and often not altogether realized even by other architects. And the more he built and the more technical puzzles he met and solved, the more problems reared up ahead.

The artistic development of the average creative architect usually took the following form: When he was five years old and his mother kept him busy with a stub of pencil, his design problems were not complex. A house was a square, with a triangle roof, two eye windows and a nose front door.

Later, when he was a beginner student-draftsman and a friend of the family patronizingly commissioned him to make suggestions for a new house, the task was still comparatively simple. He took some exterior massing effect from a magazine or from his current idol in the local scene. He added one or two details which he knew to be successful from his limited office experience. He clung desperately to orthodox structural methods so that the builder would be able to translate the drawings with as few awkward questions as possible. Inside the carefully plagiarized shell he endeavoured, without much interest or any real concern, to fit the number of rooms which the family friend had specified. He resented it bitterly when his client, unappreciative of the care he had lavished on the façade, disliked the plan and into the bargain gave him a paternal little lecture about the need for youth to get down to brass tacks.

So the next time he designed a house he added planning to his aims. Some years later, several successful plans behind him, he felt he had mastered the basic rules for convenience and efficiency in room arrangement. Meanwhile his technical knowledge had been growing. The conventional structural methods no longer seemed necessarily the best possible. He added structural efficiency to the aims of beauty and convenience. He began to see how the three could be reached simultaneously if his original idea was properly balanced. Thus he developed the habit of devoting more time to thinking round his clients' instructions, searching his mind for a basic idea not biased towards any point of the triangle of appearance, function and construction, but poised neatly between the three.

Then, as balanced ideas began to emerge, the elimination of unessentials began. He was constantly rubbing out the bumps, simplifying and refining as though his greatest desire was to return to the square form with which he had started. The inarticulate cube, however, was not his goal. For in the meantime the strength of the architectural medium had been growing in his hands and he had come to realize his power over space.

The spatial pattern which each of his buildings exhibited was no longer the involuntary result of his solutions of the physical problem. It was deliberate; it had been conceived in his preliminary balance of those problems. It coloured his attitude to every minor question that presented itself. It was ultimately built out of the co-ordination of their solutions.

Any architect who could feel confident that he had reached this stage in his development was in a happy position equivalent to a musician who had perfected his instrumental technique or a painter who had mastered the application of colour. Now he was in a position to exercise fully his imagination in the architectural art and to toy with the unresolvable problem: the impossible conflict of the most elementary forms against the imaginative expression of space.

Every structural system had its basic forms. The basic form of the simplest framed building might be a cube or a pyramid. The basic form of masonry might be a cube or a hemisphere or a half cylinder. Any of the basic forms of his chosen material were to the creative architect what a canvas of flat primary colour was to the painter. Basic form was the perfect, meaningless, sublime ultimate; his aim, but hardly his goal.

Seeking the most elementary form which was consistent with logic in structure and plan, the architect's object was yet to create expressive patterns in space.

The domestic architect, unlike the designer of churches, banks and other public buildings, could seldom rely on spectacular bursts of grand scale to achieve spatial interest. He was not permitted non-utilitarian lofty ceilings and expanded foyers scaled to mass gatherings. He was strictly limited to the scale of a single family's domestic activities. His only course was to create a pattern of the various small and diversely shaped spaces suitable to these activities. A pattern implied a flow between the spaces, and a flow implied inevitably the dissolution of at least some of the traditional barriers between compartments. The question was always this: how many barriers could be removed with advantage? Many an architect longed to discard all the barriers and to make of the home a continuous space, wherein the habitually segregated activities of sleeping, dressing, cooking, dining, sitting and so on would lose their identities and be submerged under the broad term of 'indoor living'. This of course required a degree of social informality entirely contrary to the established concept of suburban life. However, there was scope for ingenuity in compromise. Glass partitions, changes of level in ceiling and floor, lower-than-ceiling partitions, and curtains were among the common devices with which the architect after 1935 sabotaged room segregation. Sometimes the public would accept the term "psychological division" in place of a brick wall. This was the case with the living-room and dining-room partition, which had all but vanished by the end of World War II.

The problem was simplified for architects in holiday homes, where the social atmosphere permitted a kitchen and even bunks in a large general living space, and in their own homes. When he built for himself, the architect could gauge exactly the amount of informality his family could decently enjoy. Annear, Griffin and Haddon were among the pre-World War I architects who built their own homes with the barest minimum of internal partitions, and scores of later architects followed their lead.

But nothing could be more formal and restrictive to spatial flow than the prim nature of suburban convention. Thus, in the majority of problems presented to him, the most the domestic architect could hope to achieve was a well-organized juxtaposition of the conventional compartments and the rationalization and refinement of structure and details, which were no more essentially architectural problems than the design of a propelling pencil.

The Australian domestic architects' client was not well aware of most of these considerations. Architects usually did not discuss them with clients; advisedly, since normally the client's attitude would have been impatient while he sought a polite opportunity to return to the subject of the front porch design. At worst the client might have reacted adversely, wondering if he had employed a starry-eyed idealist instead of the practical man who could give him waterproof walls and silent plumbing.

The average client did expect a little more than practical competence. Often he would go so far as to say that it was essential that the house should look beautiful as well as act efficiently. He would demand, for instance, as part of his return on the architect's fees, that windows lined through on any one elevation instead of differing by three or four inches as they frequently did on builders' homes. He did at least expect good colour and craftsmanlike treatment of joinery details and a certain unity throughout the design. If he had read a little in the architectural magazines he might have pleased the architect by talking about contrasts of textures. If he were better read he might have appreciated the architect's views on the characteristic uses of materials. He might even have agreed up to a point with the architect in his aversion of excessive applied ornament and of false effect. He might have prided himself on his sense of proportion, or have had some other comparatively superficial theory on architecture more or less consciously based on his experience of the two-dimensional art of painting.

Any client might have been expected to ask for satisfaction on such rules in his project, but the intending home-builder who looked to his future house as a potential work of art was rare indeed. The art, if it was there, usually was the architect's private interest. For example, from 1935 onward there were few people who did not like large glass areas. Most home-builders would specifically request big windows of their architects. The only reason for this which occurred to the average layman was that bigger windows let into the house more sun and fresh air. He conceived of a window as a one-way valve to pleasure: it brought physical comfort into the house. On special occasions it had an aesthetic function as well: it brought a view into the house. But the architect often conceived of a window as working in two directions; out as well as in. It could be a transparent wall which dissolved the barrier between indoors and outdoors. Certainly it admitted light, air and view. Equally important, it projected the enclosed space into the open. It extended the spatial experience within the room. A selected scenic view was not important; the feeling of outdoor space was all-important. Not many suburban architects would have expressed or consciously employed these considerations, but no one working at enclosing space, not even the most mercenary speculative builder, could have failed to note how the threat of claustrophobia in the diminishing rooms of the 1940's was counteracted by the increasing breadth of their windows. The development of this dual function of the window was one of the most significant and least appreciated parts of creative architects' work during this period.

Australian building was brought up in the strict school where art meant painting and perhaps sculpture, but nothing more. Music was in another category. Any creative activity which involved the thinnest thread of commerce was suspect. Architecture's role in society was the atmospheric but unobtrusive background. The public was prepared to allow it the status of an art in the broad sense which embraced also such works as cookery and conjuring, but denied it expressive powers. No allowance for artistry was made by the banks and courts which counted the bricks and timbers when it occasionally became their duty to assess the value of a building. Each generation of young, enthusiastic, sincere architects never failed in their turn to be upset by this fact in their early years of practice before disillusion set in. At intervals from 1860 onwards some architects stood up defiantly to state that architecture was an art. Some professional artist would invariably ask them for an example and they would take their seats again in confusion.

As most architects privately admitted, the fault could not be passed to the public. Nothing but the architectural profession could be blamed if patrons of painting, music and other arts could find no excitement in buildings. In the early days the public was interested in each new building because it recorded before their eyes the growth of the colonies. In the land boom period the public was vastly entertained and even excited to witness the great expansion. In neither case did the interest extend to the art. More cultivated people showed a negative concern about the extreme vulgarity of late-Victorian detail, but positive appreciation was rare even among the best educated. In the twentieth century, art fanciers such as Tory politicians and judges often said in public something to the effect that architecture was the lowest form of art in Australia. The majority of people who had the money to build imaginatively were artistic conservatives of the jazz-hating, Joyce-baiting type, strongly suspicious of any building without a classical portico.

In the late 1930's, the number of simple rational buildings growing, architects began to claim art status with more conviction. Then industrial designers, who had been gathering their forces in the wings, began to claim the same thing. Until World War II there were these strong streaks of snobbery in all creative activity: Was architecture really art? If so, who decides when building becomes architecture? Is poster design an art? If so, is one to include show-cards and party invitations? Is industrial design an art? If so, what is there to differentiate the artist-designer from the man who makes some kind of patent coat-hanger of wire in his garage? What is the difference between craft and art? Is it that art involves emotion, or the creation of (what shall one call it?) atmosphere? The war did much to destroy this snobbery. By 1950 many people had swung round to the idea that art was doing anything well in the eyes of the gods. In this liberal light the new architecture basked happily. It found itself admitted, along with fountain pens and Bach fugues, in the company of canvas paintings.

There were always a few architecturally attuned members of the public, perhaps with less money, who grasped greedily at any pearls which architects dropped, who saved simple old houses from the wrecker, who sought out the rare imaginative buildings and followed the careers of the rare creative designers. The architects who appealed to these people were not in every case those who had the best name in the professional circle. Walter Burley Griffin (1876-1937), for example, was generally discredited by his contemporary architects and by many of the next generation because some of his houses developed cracks and quite a number of his brightest ideas were lost to bad weatherproofing.[2]

Yet Griffin, more than any man of his generation, caught the imagination of sensitive laymen. Twelve years after his death, twenty-five years after he had built his houses in Melbourne and Sydney, most of them held the enthusiasm of the occupants. People who had been shocked on first sight lived on to love his oddly-contorted buildings, to know their faults and love them still. When rain came they knew what to do; they arranged basins about the floor, humouring the house as they might an indulged but beautiful child. More than any man of his half-century, Griffin developed the spatial qualities of every building he touched. He was well-known for his chunky geometric ornament, but his importance lay in the power with which he manipulated space. His ornament was no more than punctuation to the pattern which flowed through his interiors.

Griffin was born in Maywood, Illinois, U.S.A. He was one of the last of the "Chicago School" of late nineteenth-century rebels. He was a product of the great tradition of American architectural pioneers — Tenny, Richardson, Sullivan — and Frank Lloyd Wright, the giant among giants. Griffin built several houses in the tradition around Chicago. In 1904, aged 28, he started work with Wright. In 1912, with Marion Mahony, another Wright pupil and his future wife, he won the international planning competition for Canberra. In 1913 the newly-married pair arrived in Australia, practised for a year in Sydney, then moved to Melbourne. After fourteen years they returned to Sydney for the last three years of his stay. Griffin and the Canberra plan were front-page news in every Australian newspaper in the months after they arrived. When he moved to Melbourne and started building Newman College and later the magnificent plaster honeycomb of the Capitol Theatre, his name became better known than that of any other architect at any time in the history of Australia. For he had brought something new to Australian building with the atmospheric modelling of his buildings; in many people he had awakened the first appreciation of the art.

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[2] In one of his houses on Castle Crag, Sydney, a goldfish tank was built into the ceiling of the dining-room. Lights above it cast the shadows of gliding fish over the dining-table. It was not used after the tank water was found to be dripping on to the dinner.

While the big projects publicized his name, his smaller, more intimate domestic work had the strongest public appeal.

The leaks and the cracks which some of his houses developed did not indicate that Griffin was disinterested in construction. On the contrary, he thought more about structure than most of his architect critics. He was seldom content to accept the conventional techniques. He always maintained that the twentieth century should be able to devise better methods. But the execution interested him little. Also he was too mild a man to handle some of the tougher tradesmen, too generous to see through the excuses of a plausible contractor. For various reasons most of the shoddy work done in his name was built without his personal supervision. He was apt to put a little too much reliance on theory and sometimes to be impatient with the time test, of which less imaginative designers were inordinately respectful. He took risks which were not always successful. Thus his legacy to future generations of Australian architects included a few leaky roofs and a gallery of buildings which could have been their greatest inspiration. For every house he built was firmly based on some spatial theme, if only one as elementary as that of the square house, if only the complete exploitation of a northern aspect or the blending of many rooms in a fluid general living space or the transmission of a view through several rooms by means of glass screens.

Other houses before and after Griffin had incorporated similar features. Griffin's were different from many in that every cubic foot of space he enclosed was subservient to the chosen theme. Thus each house developed a powerful personality which sooner or later won round the most apathetic occupier.

These exciting architectural patterns were devised by a modest, gentle vegetarian, helped by a vital and resolute architect-wife, who loved building with the kind of passionate intensity that only an expressive art can command.

In 1933, the year Desbrowe Annear died, the popular revolution of architectural thought was beginning. The Functionalism he had pioneered in Australia was formally recognized. An approach more sympathetic than his widened slightly the windows, relaxed slightly the geometry of the plans and softened the textures. A warmer technique was developing and again domestic architects were making most of the moves (the world of the big building had only just heard about cubist decoration).

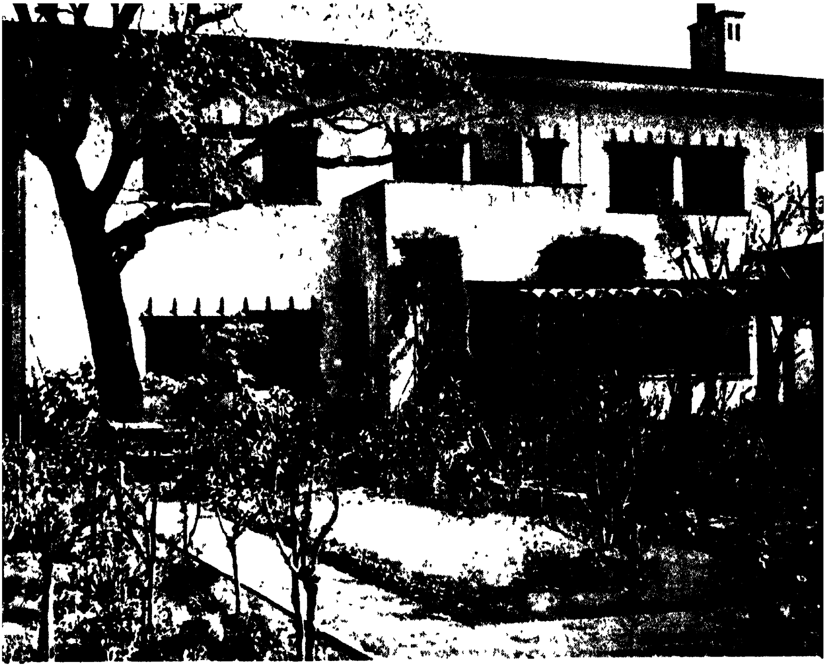
Mewton and Grounds, representative of the avant-garde of young architectural firms, opened practice as the first rifts began to show in the depression clouds. These contemporaries, Geoffrey Harley Mewton and Roy Burman Grounds, were twenty-eight years old and just returned from Europe when they started building in Melbourne in 1933. At first their work was smart with corner windows and flat roofs, self-consciously close to the spirit of the International School. In less than a year this superficial stylism was dropped. The houses became simplified, rationalized versions of traditional Australians plans. At Ranelagh on the Mornington Peninsula and in some inner suburbs, they built with familiar materials: bricks, wooden casement windows, V-jointed lining-boards, sometimes even with tile or corrugated-iron roofs. They used many traditional elements: the gable roof extended to form a verandah, the row of white posts, the pergola, the louvred shutter. But the materials looked new because they were put together in a new way. They looked squarer and lighter and there were fewer lines, ridges and pockets. The traditional elements of planning seemed new, because they were ordered into more precise shapes and they seemed to cohere better, making a simple but vigorous little pattern of every house.

Despite the newness and the simplicity, the flat roofs and comparatively long stretches of glass, there seemed to be something here which one had seen before, round Parramatta and Camden by the white roads the convicts built. There was no apparent desire for the Australianesque, no chasing of Macquarie atmosphere with fanlight and porticos, as in a current Neo-Georgianism. Any similarity was inherited, because the buildings were easy and unself-conscious and were answering basically the same problems that the old colonials had had to solve.

In such Mewton & Grounds' buildings as the "Chateau Tahbilk", a vineyard homestead in central Victoria, a school of design was reinstated. Later this school was to grow into a distinctive Victorian house-type. With its spreading single-storey plan, low-pitched gable roof, wide eaves, sudden walls of glass set between blind masonry masses, abundance of texture and bleached colour, this house-type led Australia past the strict Functionalist camp, past the temptations of the "latest" materials, past the more exciting cantilevers and the invisible ground floors, until she found herself, some fifteen years later, approaching the international modern movement in domestic work on the same ground.

After these partners separated in 1938, Mewton continued to develop the characteristics of the new Victorian house-type in urban buildings, as a partner of Edward F. Billson and later in the firm of Godfrey & Spowers, Hughes, Mewton and Lobb. He remained a leading exponent of the type after World War II, when it became the almost universal means of expression of younger architects and was beginning to influence the builders. By then he had changed certain elements, but not the approach. He was forming his houses in a number of clearly defined blocks, each roofed with an independent and visually opposed monopitch roof. But the exposed rafters, the light posts and pergolas, the limited glass size (about 2 ft. 6 in. square), the long runs of evenly-spaced mullions in the french-windows of the living-room, the two-light casements to the bedrooms, the contrasts of natural textures, the warm colours — these elements were still alive and would probably carry this Victorian way of building past many individual side tracks.

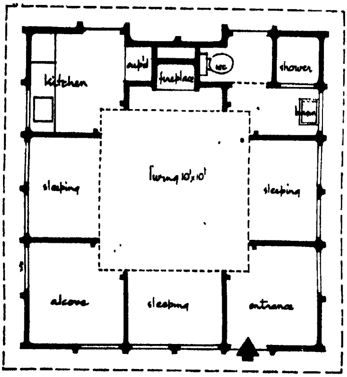
Roy Grounds meanwhile had been to Europe again. In 1940 he reopened practice with a block of eight bachelor



HAROLD DESBROWE ANNEAR: "Inglesby", South Yarra, Melbourne (1918)—one of the first "Functionalist" houses, notable also for its timber frame (with rough-cast stucco) at a time when brick was obligatory for big houses, its virtually flat roof with gravel finish, and its window hoods hanging from exaggerated brackets—the only decoration and a favourite Annear device.

His own house at Heidelberg, Victoria (1902-3). A module rules the spacing of the window mullions and wood straps, but with no strict discipline. It has one of the earliest "open" plans, with space flowing freely between sitting-room, dining-room, breakfast room and balcony.

WALTER BURLEY GRIFFIN: House at Toorak, Melbourne (1923). Walls of 3-in. concrete "Knitlock" ribbed blocks, roof of "Knitlock" tiles.



Plan of his basic "Knitlock" house, built for himself at Heidelberg and later repeated at Frankston as holiday cabins—a square of 21-ft. sides with a central living space 10-ft. square, its ceiling rising under the low pyramidal roof. The alcoves have low ceilings and no doors. A rare sample of absolute simplicity, not to say naiveté, in approach to plan and structure, and of the welding of the many parts of a house into a coherent pattern.

flats named "Clendon". This was probably the most influential Melbourne domestic building of the decade. In this first building for nearly three years, Grounds achieved such easy grace and natural simplicity that his earlier buildings immediately showed as immature. "Clendon" was merely four identical rectangular flats arranged in a U-plan; doubled by another floor. A wide balcony, cantilevered from a line of slim circular posts, half covered the internal court and gave access to the upper flats. It was all unhurried, obvious common sense; but with the almost sentimental charm of the earlier Mewton & Grounds work still intact.

Even if this subtle charm had not appealed to the students of the 1940 decade, such details as the stair, hanging on extended balusters, could not have gone unnoticed. "Clendon" was the direct prototype of at least three copies within a mile radius. It lent details to dozens of other houses and small flats during the next ten years. These details included certain features of its compact kitchen plan, the glass hatch which left the kitchen open to the living-room, the folding wall-bed and the squared obscure-glass screen inside the front door. Among the better-known of Grounds' later buildings were "Clendon Corner", another block of the same character as "Clendon" on a similar site next door, and after the war two houses at Barwon Heads. These had an elevated living-room with garage and services beneath, and a bedroom wing at right angles on an intermediate level. The expression of the structure and function in all these was sharp, concise and to the point.

On the other hand, in 1941 he built a larger block of flats on a steep, eccentric site on the Yarra Boulevard. Here no obvious rectilinear plan was possible. He set out the building as a fan shape springing from a central point of the circular end of the entrance street. This resulted in a complex building of several levels, concentric arcs and broken planes, a dramatic form hanging on the rocky cliff. Yet both complexity and drama were ordered and coherent. The building was tuned to the one key. It was a clear statement without exaggeration or redundance. It was consistent with the line of thought of matter-of-fact "Clendon".

So Grounds' work varied, vigorous or subdued in character according to the circumstances of site and function. His technique never varied greatly. He was always happiest when working in what was basically traditional Australian timber practice. The quality of his work had nothing to do with smart or ingenious details, although these did appear. The different character displayed by each building was created only by the form, and particularly by the plan shape. This was usually simply geometrical, as in the case of a house in Kew, built late in 1951, whose plan was an equilateral triangle, its apex supported on a pencil-thin pipe twenty feet above a decline. In every case the plan shape was chosen with intuitive appreciation of the conditions and an instinct for exploiting the natural romance of any building site.

During the first half of the twentieth century, eclecticism died slowly. Progressive architecture, however, was still in two minds. The principal movement developed in central Europe, where pioneers before World War I cleared the ground for the sharp white cubes of Functionalism. But in other regions, notably the West Coast of the U.S.A. and Scandinavia, a woodier and warmer movement developed, parallel but apart. While Le Corbusier (Charles-Edouard Jeanneret) became the principal theorist and spokesman for the former school, the writings and works of Frank Lloyd Wright, a rebel who could never be fitted into any school, provided the gospel for the latter. For want of better words in twentieth-century architecture's limited vocabulary, the two movements were often referred to, half-facetiously and disparagingly, as the International Style and the Cottage Style respectively. Less accurately, the former was sometimes called Rational-Functional and the latter Irrational-Organic.

These two schools of thought first drew apart on the subject of ornamentation. The International (European) School at first banned it unconditionally, later relaxing enough to allow, if not applied ornament, at least some decorative use of the textures inherent in industrial processes. The Cottage (American) School, on the contrary, always had a fondness for ornament when it grew from the building "as the blossom from the tree", as Wright said.

However, the two schools shared many more fundamental precepts. In breaking with the popular stylistic conventions of the day, both believed that they were restoring the dignity of architecture. Both believed simplicity to be the omnipotent law of all design. Both rejected the idea of composing the façades of a building to preconceived rules. Both accepted spatial composition as the expressive field of architecture. Both believed that the building's function was the only basis for planning and that it should (and would automatically if permitted) be expressed in the building's form. Both believed that no material should be twisted into unnatural forms or asked to perform an unsuitable task.

Yet with so much in common, the buildings produced by the two schools were often as different as Gothic from Greek. While the Functionalists' would be square, hard, sharp, forceful, the Organicists' would be less austere in line and texture. One a cube: three sides concrete, three sides glass; the other a native growth: wood, stone and woolly materials merging. One defiant, exhilarating, proud; the other sympathetic with and subservient to the landscape. One stated man's superiority, his power to build invulnerable fortresses against the elements; the other confessed his inferiority, his ultimate dependence on nature for his existence.

There were various degrees of loyalty to one or other side among the progressive architects of the twentieth century, but in the main natural mathematicians were swayed to the artificial, mechanistic, intellectual school; natural romantics towards the humanistic, organic, emotional culture.

The earliest examples of twentieth-century architecture in Australia, by Desbrowe Annear and few others, were Functional. The rapid developments of the twenties, led by Burley Griffin, were Organic. The popular revolution of 1934, exemplified by houses in Sydney[3] by F. G. Gilling, and in Melbourne[4] by Yuncken Freeman, Freeman & Griffiths, was International Style. Each of these houses, flat-roofed, corner-windowed, white-walled, was built for a person and in a place prominent in the society of its city. They were well publicized in press social notes.

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[3] New South Head Road, Vaucluse.

[4] Whernside Avenue, Toorak.

About this time, overseas, the two schools began to draw closer together, physically as well as in spirit. First Nazism and later the war drove most of the best-known progressive architects from Europe to America. A few still saw with the "new vision", as they said, but others allowed themselves to indulge in some of the sentimental practices of the Cottage Style — such as the selection of a material for no better reason than the natural beauty in its surface texture.

Most progressive Australian domestic architects between 1934 and 1939, and nearly all of them after 1945, used wood, bricks, rubble stone, even pisé, in low, spreading buildings of general horizontal character. These architects would make use of reinforced concrete or a steel frame or a new plastic if necessary, and would express the character of the chosen materials in machined shapes, in much the same manner as the old International School. The chief difference lay in the fact that these architects did not specially admire the machined look. They did not go out of their way to find a flush, square-cut finish for every surface. They were prepared to show some of the carpentry of the house. They liked, for instance, to express the roof framing by exposing rafters beyond the wall line. They did not carry this principle far, however. Wall studs were never exposed, nor was plumbing, except in error or incompetence. There were strict conventional limits to structural nudity.

Nearly all serious twentieth-century architecture in Australia, as distinct from self-conscious experiments and stylistic copies, tended, then, to Cottage Style. Some of the European architects who settled in Australia after 1939 worked closer to the International, but the first uncompromising stand to revive the original principles of anti-natural architectural design was made by Harry Seidler, who started a practice in Sydney in 1948. Born in Vienna in 1923, Seidler did preliminary architectural studies at Cambridge, England, and at the University of Manitoba, Canada, where he won, in 1945, a scholarship to Harvard, U.S.A., for post-graduate work. In the next three years before he arrived in Australia

Seidler worked and studied under three of the great names of twentieth-century architecture: Walter Gropius (on post-graduate work), Marcel Breuer (as assistant in New York) and Oscar Niemeyer (on travel in Brazil). Despite much opposition from various authorities, in his first years of practice he built several houses and a large block of "owner flats".[5] These possessed in common a character unfamiliar in Australia. They were sure, mechanically precise things. They were square, straight, white and challenging. Australia had seen many of their elements before; in cheap work, stylistic copies of the original European. But these were Gropius, Breuer, Neimeyer, welded with understanding sincerity by an imaginative disciple. Seidler was intensely thorough. He studied and predetermined the smallest detail of plumbing or wiring. His work had the satisfying quality of a correct sum with a teacher's tick beside it.

The three houses had some elements in common. Each was basically a six-sided rectilinear box. Each had an eaveless roof; the windows were individually sun-shaded where necessary. Each displayed "tensional dynamic symmetry in two-dimensional compositions", as he said in the language of the new vision — that is, walls of glass were broken into Mondrian patterns by irregularly spaced bars rather than by the evenly spaced rhythmic mullions of his Australian contemporaries. In each, colour was confined to "carefully placed accents in large spaces of neutral quiet tones" — that is, walls were grey and doors were in strong primaries. Each house was "suspended on visually negligible supports"—the floors were raised on pillars in the Le Corbusier manner.

However, each of these three houses was quite distinctive, for their strength lay beyond the theories, the "tensional dynamic symmetry" and the imprisoned colour. Each house lived in its unique spatial pattern. Within the six sides of each precise cube there was expressed a single, simple thought, skilfully developed without conflicting elements. In one house the square of the plan had a rectangular slice removed for an open court. The living-room was a continuous space including this court and the stair up from the ground and the kitchen. This living space took its sun from the court and its view from a glass wall on the other side, south to the ocean. On the opposite wall of the court was an alternative outlook — a mural, floodlit by night.

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[5] The first houses were in Clissold Road, Turramurra; Coorabin Road, Northbridge; Queens Road East, Newport. The flats overlook Elizabeth Bay.

In another house, set on a steep slope, the elements were stacked in a methodical vertical pack on a terrace cut into the cliff. A garage and entrance section sat higher up the cliff behind, prodding the pack at its middle with a covered entrance way. The living-room was two floors in height; the sea view was borrowed on the upper level across the well of the room.

Seidler's work caught the imagination of students who were just escaping from a *beaux-arts* atmosphere at Sydney's late-awakening architecture schools. Some pictured him as a second Griffin, come now from the other camp. Others criticized the "un-Australian" character of his work and his sometimes over-obvious use of Mondrian and cubist motifs in murals and in the pattern of glazing bars and shelves. His own writing and lecturing to the Royal Australian Institute of Architects and to students was uncompromising in the use of such terms as "counterpoint" and in his attitude to the opposing school of contemporary thought: "Does not this [organic] architecture seem rather weak, subservient and not very proud of itself?"

Older critics were inclined to dismiss his work on grounds of immaturity, as witness his youth. On the subject of age, Seidler wrote: "It may well be that the older generation cannot be expected to grasp the elements of the 'new vision'; their antagonism can well be understood even if not tolerated. It is for the younger generation to take up the immense challenge of solidifying the already well-established manifestations of the new architecture all over the world. . . . "[6]

At times like this differences between the two schools brewed up into arguments more intellectual but not much more rewarding and almost as acrimonious as those in the Battle of the Styles of the previous century. Some onlookers, however, welcomed these discussions. That two divergent philosophies could be accommodated within the agreed precepts seemed to indicate that the second half of twentieth-century architecture would be far from sterile. Perhaps the divergence even gave a promise of richness in emotional content which was lacking so far in much of the century's architecture. Between the white cubes of the Functionalists and the woody intricacy of Organicism there was a scale of architectural values. Future development might lead to the elimination of this scale by a gradual convergence of the two schools until they unite under a compromise banner. On the other hand, the future might see a conscious development and exploitation of this scale and the emergence of a state in which a mature architect would be capable of drawing upon it to suit the emotional inspiration of his subject.

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[6] *Architecture* (Journal of the R.A.I.A.), October 1949.

Two categories of architectural writers were always in evidence. There were some able and fiery contemporary critics of the excesses of each age, but the larger group consisted of apologists and flatterers and manufacturers of theories to fit fashions.

Even in the most irresponsible eras of design there were writers who could lay their pens to scientific sounding and undoubtedly sincere arguments to justify every odd curve and colour. In 1912, when speculative builders were spreading the thick redness of Queen Anne on the new suburbs and all sensibility appeared to be lost, there were theorists at hand to explain each bay and broken gable. The fashionably ornate roofs of the day were being credited with a functional basis by contemporary magazines. These grossly over-blown and distorted roofs provided "extra space for storage" and were "stronger than straight roofs", it was said.

Six years earlier than this, in May 1906, *Art Nouveau* ornament, which was then aimlessly entwining every arch and mantelshelf within reach, was handsomely credited with knowing where it was going by the critic W. Fulton. "It demands reality," said Fulton. "Plaster imitations of metal are rejected." (Metal imitations of plaster were just around the corner.) "The new art uses plaster, but uses it as plaster.

It sees that ash as ash, is more beautiful than when it masquerades as oak."

No modernist after 1934 could have quarrelled with that statement, yet the buildings to which Fulton referred offended all the beliefs which the later architect held dear. And much earlier, in 1887, at the height of Italianate extravagance, the theorists had been able to explain the current voluptuous style in functional terms. When the Sydney-Melbourne firm of Loweish, Moorhouse and Figgis built with unbridled opulence a pair of huge, towered, twisted houses in St. Kilda, *The Builder and Contractor's News* had said: "The architects may be credited with having designed two buildings which embody Colonial ideas and are well suited to the climate and general characteristics of Australia."

This voice from the depths of Victorian architectural indiscretion found an almost exact echo in the captions of any progressive home magazine of the period following World War II.

Talk of suitable, natural buildings was not, of course, new in the eighties. Nearly forty years earlier there had been calls for functional expression in buildings. In 1850, the *Australasian,* a Melbourne quarterly, published an anonymous article in which these timeless words appeared:

". . . Take for instance a wide spreading umbrageous tree: deprive it of the foliage which gives it so much grace and you have at the same time deprived it of the means of subsistence. . . . The exquisite symmetry of the greyhound and the racehorse is in every particular essential to the existence and comfort of the animal. . . . In organic bodies we find beauty similarly dependent upon, and arising out of, their very constitution. . . . This principle of oneness in the requirements of beauty and utility is also observable in the works of man. Thus in architecture, beauty, convenience, strength and economy all more or less depend upon architecture's cardinal virtue – simplicity. A confused and embarrassed plan will not only produce an unpleasing effect, but will also prove inconvenient, expensive and probably insecure."

Thus it appeared in writing in 1850. These were some of the first words of architectural philosophy recorded in Australia, in her first art journal, yet they might have been the last words in the coloured pages of the next century. Any school of architects in any period, with the possible exception of the extreme Functionalists of 1910-20, who were disinclined to allow beauty any rights, might have taken this as a preliminary statement of their precepts.

How could the same ethics, continuous through a century, have fostered such widely divergent results? The architect of the 1940's and 1950's could look back to his Colonial predecessor with the greatest understanding. Indeed, it became popular about 1946, when there was little contemporary production, to laud anything pre-1840. Students would analyse critically the proportions of a primitive bluestone barn and were inclined to expend extravagant praise on the details of an old building which had no more intrinsic merit than the ordinary farmer's cottage of their own period.

There was a simplicity and down-to-earth sensibility in the Colonial work which was wholly consistent with the continuing theories. It often met the work of the 1950's on a common level. But between the two was a series of enormous gulches (the rises between were not high) which could never be reconciled with the theories. Twentieth-century architects would have found the history much easier to understand if the people who had dug themselves into those architectural gulches had repudiated the theories. But they had not. It was sufficiently clear that the most extravagant Victorians sincerely believed they were following theories of construction, planning and ornamentation sensible for Australia.

The post-1934 architect was confident enough that his work was genuine and as complete as possible within the limitations of materials and techniques available to him. Architects in the troughs of late Victorian or Edwardian times were no less confident.

Were those architects of the dark red age knaves or only fools, then, that they allowed the sensible theories to go so wildly astray before reaching fruition? Were they only out for commercial gain on the wings of the popular fashion?

Was architectural integrity born in 1934? Sometimes the architects of the 1950's would ask themselves these questions to test the validity of their own interpretation of the timeless creed.

Though they may have been wildly confused in their interpretations of the sound theories, the Victorians were of course no more guilty of commercialism than the average Colonial architect or the average 1950 practitioner. Even such devices as "graining" had their ethics. In the declining years of this practice a supporter wrote in a Sydney trade magazine: "Many examples suggest that graining has become an imitation; that is to say, grainers, instead of imitating natural wood, imitate other grainers' work. No artistic craft can long survive that kind of thing."

Then, if the architects of Victorian debauchery had ideals and were not, as a general rule, over-cynical, how did they come to make such strange buildings? Was it because critical standards had dropped so low that there was no one to warn them each time they overstepped the line of reason?

But there were always people alive who cared for architecture, who shouted warnings and, when these went unheeded, taunted, coaxed and jeered until no architect who listened could have remained unconscious of the direction he was going.

"The majority of modern architects depend upon a vulgar taste combined with a distinct aversion for all that is truthful and consistent in their designs." Nahum Barnet made this statement, typical of the heated words of exasperated prophets of the Victorian press, in 1882.[7] He continued, "An architect should so construct [a building] that it may 'speak its own standing' with parts and proportions bearing their own brunt of existence without the need of any shoddy stucco splendour to beguile one into a miserable belief as to the solidity of the structure."

Criticism of this standard was indeed more familiar when good building was rare about 1850 and 1885, than in the twentieth century when many examples of better architecture could be found. But the need for a continuance of such criticism, directed at the everyday architect and builder, was certainly no less urgent in the 1950's.

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[7] *The Victorian Review* (Melbourne).

Conscientious Functionalists were sometimes swayed by illogical fashion in their anxiety to escape it. Architects of every period tended to avoid some sensible things merely because the herd had adopted them. In such a way the white wall had a varied career. It was as old as white Australia. The first Port Jackson wooden huts were whitened with pipeclay; the brick of Colonial homesteads was often whitewashed. For half a century after 1880 the practice was dead in the public mind, but architects always had it up their sleeves, a trump card when form failed to lift their building above its neighbours. White, it seemed to architects of the between-wars period, was and always would be the ideal colour for the walls of the Australian house. It was a clean, crisp, decisive note in the dusty-green bush. It was cool, sparkling in the brilliant sun. It was the perfect ground for the play of shadows, on which architects were relying more and more for decoration. People of discretion agreed with the architects, and many a Queen Anne red brick was painted over in white about the time of World War II. Then the builder-designer began to appreciate the difference and the smallest suburban cottage sometimes gave up its cream and green in favour of white. When this happened the architect stopped and looked about for tinting pigments. He took some green and mixed in a little burnt umber to give a muddy olive hue. He discovered dirty blues, cocoas, mustards and other greyed subtleties in the dress shops. He covered his walls in them, leaving only the windows and door frames white. The front door he painted a stronger colour in rough complement to the wall hue.

Lemon yellow was popular with designers from 1937 to 1947. An old house remodelled by an architect during this period stood every chance of being repainted with light grey walls, white frames and a lemon door. The roof would be in a deeper grey with a touch of mauve. The same house being remodelled in 1950, when grey and lemon had become fairly acceptable to the public eye, might have had dusty green walls and a cinnamon front door. But by this time the idea of featuring the front door in a different colour was so widely accepted that self-respecting architects felt obliged to look for other planes to treat in contrast to the main colour.

This understandable if unjustifiable urge of some architects always to be one jump ahead of the populace in the unimportant matter of colour was bad tactics, for unfamiliar logic in the structural shape often would have been less offensive to untutored eyes if it had been wrapped in a coat of comfortably familiar paint.

There were times when new shapes needed friends. Artists in any field who ventured far from the well trodden course were often snubbed and slighted.

In every generation there were architects, artists, decorators and writers who felt their own abilities were surely being wasted on their fellow Australians and who left, confident that they would be better appreciated overseas. To their contemporaries' surprise, almost invariably they were. It seemed that Australia's greatest problem, in art as in economy, was her lack of population. The proportion of appreciative laymen may have been no lower than in any other country, but of a maximum population of eight million this proportion accounted for too small an audience to pay for elaborate artistic exploration. One little art magazine after another flared up for a day and died. Commercial periodicals of letters, arts and architecture failed simply through lack of audience; there was no doubting the capability of much of the production nor the enthusiasm of the handful of readers.

Architects who pushed on too fast for the popular fashion often brought upon themselves ridicule, upsetting arguments with municipal authorities, even litigation. The shape of the roof, which was the mark of style from the time it was moulded into picturesque tangles in 1900 till it disappeared in 1934, was the cause of most trouble. Many people were bitterly resentful of unfamiliar things above the eaves gutter. Hardy Wilson was one of the first to discover this when he was building his own home, "Purulia", in Fox Valley Road, Wahroonga, N.S.W., in 1912. His simple rectangular cottage was roofed by an unbroken hipped roof of shingle tiles. Its long elevation to the street had a central glass entrance door flanked by long louvred shutters. On either side, in exact symmetry, were three sets of 12-pane, double hung sashes, each fitted with smaller louvred shutters.

Hardy Wilson had taken many months on the plan. It was not to be a masterpiece, he admitted, describing the building in 1919.[8] "The time is not ripe. . . . The masterpiece in architecture demands great work from many hands. These hands have to learn to fashion beautifully, making many splendid failures before the gem is born." Nevertheless it was to be the most beautiful cottage that Wilson, in hours of loving labour, could devise. It was to be the expression of his soul-searching philosophy, unimpeded by another owner's practical requirements. It was to be moulded in every detail under the almost painful concentration of one of the few architectural philosophers in the country. But the neighbours did not like it.

A deputation of locals appealed to the council to have it condemned as unsightly. "As the walls arose, square, bleak and factory-like," Wilson wrote good-naturedly, "consternation filled the souls of neighbours dwelling in multangular villas." By the time the roof was framed their indignation could not be contained. They foresaw depreciated values all along the road. However, Wilson managed to forestall the opposition. A confidential appeal to shire councillors showed the neighbours that there was no building regulation to prevent a "four-square dwelling".

A quarter-century later, when Albert Hanson, architect, built his own home in Canberra, he encountered the same sort of opposition. His house also was rectangular in plan. It had ivory-washed brick walls and a roof pitched in a single low gable, asbestos-cement covered and painted light green. Residents of the surrounding district lodged a fruitless complaint with the local building authority in 1941. They claimed that a roof of this type would depreciate values of neighbouring houses and "would be detrimental to the standard of buildings in this area, or in any residential area on the south side of Canberra".

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[8] *Domestic Architecture in Australia,* special number of *Art in Australia* (Sydney 1919).

Other architects who later found themselves in trouble with municipalities or the public for using untraditional roof shapes included: Leslie Mitchell and Francis T. N. Jessup, for a monopitch roof in Surrey Hills, Melbourne (1940); Roy Grounds, for flat roofs in Barwon Heads, Victoria (1947); Kevin Pethebridge and R. S. McCulloch, for monopitch roofs in Croydon, Victoria (1948); Sydney Ancher, for flat roofs in Ku-ring-gai and Warringah (1948) and Harry Seidler for an inward pitched roof, also in Warringah (1949).

The second Ancher case was the most notable because it was the only one to reach court, and during proceedings it evoked probably the most significant official statement on the status of architecture ever recorded in Australia.

Sydney Edward Ancher, who was born in Woollahra in 1904, left Australia after serving articles and winning a scholarship[9] in 1930. Six years later when he returned, exhilarated by what he had seen in Europe, he built one of the first flat-roofed houses in Sydney. In 1945 he built himself a home in Gordon, north of Sydney, which subsequently won the Sulman Medal as best of the year. It was not, however, the house he had planned. The council had insisted on brick walls where he had intended a steel frame and on slate or tile (he selected the former) where he had intended a flat roof.

Two years later in another place he encountered a similar municipal barrier. This time his drawings showed the simplest house he had yet planned. It had a few slab walls and several large lightly supported sheets of plate glass running from a balcony floor to a flat slab roof. Despite the softening line of a pergola, these drawings offended the authorities of the area, the councillors of Warringah Shire. They returned the plans with a note that approval would be subject to some conditions. One of these was: "to roof having a continuous parapet wall at least 2 feet high above roof." Ancher's client, W. M. Farley, an engineer and surveyor just returned from overseas, was no less resentful than he. They requested the council's reasons for imposing the condition. It replied by letter that they were "reasons of (a) design, (b) public interest, (c) nature of buildings and (d) policy of Council." Amplifying, "It is the policy of this Council to require flat-roofed buildings to be surrounded with a low parapet to hide . . . the ugly view of a flat roofed building. . . . It is this council's endeavour that design of buildings in the shire should be as pleasant and pleasing as possible." The letter went on to say that the interests of the public, then and in the future, must be protected and that it was felt that the "architectural aspect of the neighbourhood would be detrimentally affected" if the parapet was not added. It finished on a helpful note: "You are advised that the council will be very pleased to consider plans for a similar type of residence with a roof of orthodox design or if a satisfactory proposal were submitted, it would be prepared to amend the proposed height of a screen in place of a parapet." The council probably had in mind previous cases where an ornamented wrought iron screen was substituted after discussion.

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[9] Australian Medallion and Travelling Scholarship, by the Board of Architects of New South Wales.

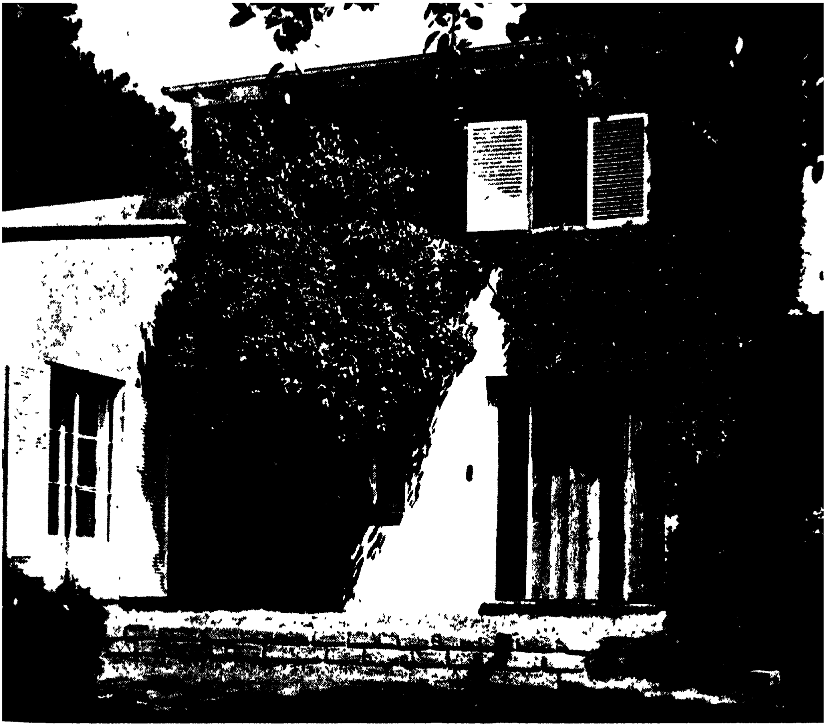
This was the most clear-cut case of official denial of the rights of the individual to roof according to his conscience. In other cases of roof trouble the public may have stated aesthetic objections to the growing building, but councils, however warmly they may have agreed, had been careful to pretend that their objections were based on some alleged structural shortcoming or some subtle contempt of the regulations.

This time the baulked builders did not submit. The owner, Farley, appealed in the Land and Valuation Court of New South Wales. Ancher of course was a witness. In court he said that "the phrase 'contemporary building' referred to a structure conceived in a spirit of correct use of the materials now available, rather than use, and automatic expression which follows use, of more conventional materials." Supporting him was Walter Bunning, who was the best known architectural publicist in the country since the publication of his *Homes in the Sun* (1945). He described the use of a parapet to conceal a roof as a jerry-builder's trick and said Australian design was thirty years behind other parts of the world.

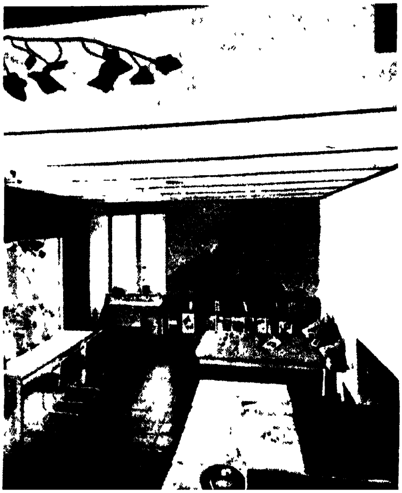
On the council's side the chief witness was W. R. Roach, Chief Health and Building Inspector for Warringah Shire. He cited with apparent pride some two dozen flat-roofed projects which the council had rejected in recent years and described the Ancher house as "not pleasant, too stark and very different. More like a gun emplacement on North Head than a house." Supporting him was Mr. Harris, past-president of the Council and chairman of its Health and Building Committee. "In my position as a Councillor," said Mr. Harris, "I have to represent what I believe to be the opinion of the community and for that reason I say I must object to any startling innovation."

On 1 March 1948, Mr. Justice Sugerman handed down a judgment upholding the appeal. He held that the question was solely one of aesthetics and balanced the council's views against those of the "two architects of great distinction in their profession". The judgment then concluded:

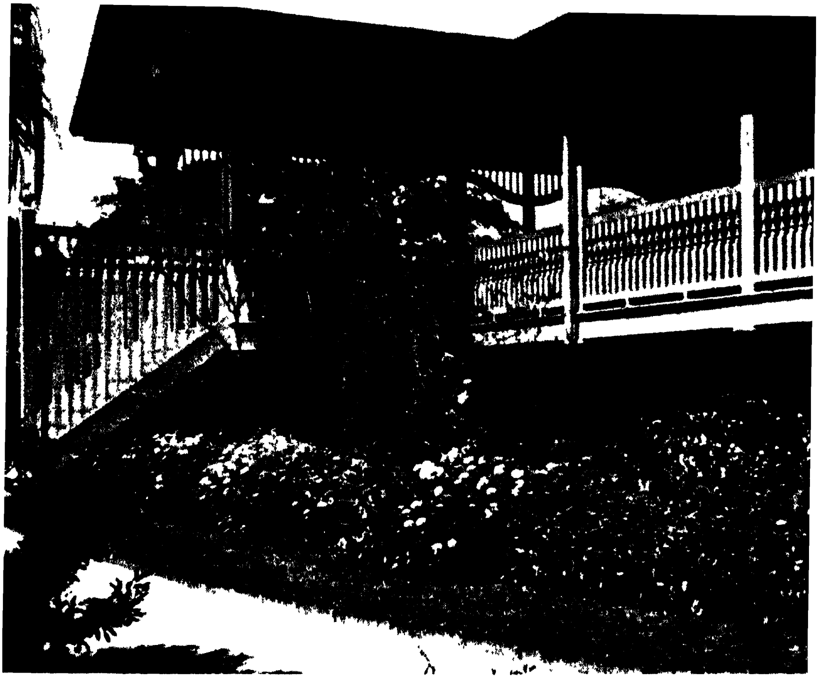
> The Council's standards, and their application to this particular proposed building, have been attacked not, for instance, as being too high and thereby imposing an undue burden on the individual, but in a sense as being too low or at any rate as insufficiently advanced. . . .
>
> The proposed building is not a mere freak or eccentricity. Discussion during argument showed the difficulty of defining in general terms what might be rejected as falling within this class, but there is no need to attempt a definition here. On the contrary the building here in question is designed by a highly skilled architect applying principles widely recognized and adopted in contemporary design. . . . There may be cases in which, on the evidence, a flat-roofed building, or some other building which departs from standards hitherto generally adopted, should be rejected, and I think that Mr. Bunning concedes that possibility. But the present is not such a case. The evidence in favour of this building, both as to the general principles of design which are involved and the particular application of them here, is very strong, and the only answer to it is a general view that flat roofs are ugly and should be disallowed unless concealed, a view which I think really turns out to be based on the novelty and unfamiliarity of flat roofs in this country.
>
> This court is also required to have regard, among other matters, to the public interest. The interest here in question



MEWTON & GROUNDS: "Chateau Tahbilk" homestead, Tabilk, Victoria (1934)—the front terrace. Indigenous materials and traditional techniques were used for perhaps the first time with fitting modesty and easy grace.



One of the most influential rooms of the first half of twentieth-century Australian architecture—the living-room at Roy Grounds' own week-end house at Ranelagh, on the Mornington Peninsula, Victoria (1938). Years later these "natural" finishes were fairly commonplace—fibre-board ceiling, whitewashed brick wall, tile floor, vertical Australian hardwood board walls.



BRISBANE HOUSES: *Top*—house at Clayfield (Robin Dods, 1903), and (*bottom right*) its typical vertical louvre assembly at the verandah edge. *Bottom left*—house at St. Lucia (E. J. Hayes, 1949).

> is the interest in the progress and development of architecture, an aspect of the wider social interest in cultural progress. The advancement of architectural design is an aspect of cultural progress which, in the exercise of its present jurisdiction, this Court cannot ignore. When faced on the one hand with the claim that domestic architecture should be required to retain its familiar sameness and on the other hand the claim that architects of skill and understanding should be allowed to introduce, or at any rate to try out, here the principles of contemporary design which have been widely accepted elsewhere, the path of this Court is, I think, clear. . . . The development of architecture must be impeded while any large and important area closes its gates to the unfamiliar in architecture as such.

The council's condition was overruled. The Ancher house was free. But if the councillors were chagrined they were not showing it. Next year they attacked again; this time against the architect Harry Seidler for his house with an inward, or "butterfly", roof. The plans were rejected with the statement: "Mr. Seidler be informed that council considers that the pitch and material should be in accordance with ordinary practice and that plans be amended so as to insure permeability (*sic*), durability, healthiness and ventilation. The council desires that any building erected in this locality shall be as pleasant and pleasing as possible and in line with the standards commensurate with the development taking place in the shire."

The phrase "pleasant and pleasing as possible" had apparently been lifted from their file on the Ancher case. Seidler prepared a statement which included illustrations of eight dilapidated shacks within a half-mile radius of the projected house. "The council's request for conformity to the 'standards of pleasantness' in the area is outrageous," he wrote. "I deem it unnecessary to reply to this insolent statement. Obviously it is a hopeless task to even offer my arguments, since the request itself proves the thorough incompetence regarding matters of aesthetics on the part of the officials concerned." However, he offered to give the building committee a lecture illustrated with slides to show them "what modern design really is". He also explained that his client was fully prepared to take the matter to court to have the Ancher case verdict repeated against Warringah

Shire Council. The press took up the story, sympathetically. Three months after their first refusal, the council returned the original plans and specifications stamped with approval, without other comment. It seemed apparent that architecture, if she were well advised, would never again be forced to defend herself in a court against municipal aesthetic prejudice. The Ancher case was the first and probably the last.

15

Environment

FROM the moving sands of the centre to the deep snow of the southern Alps almost the full range of the world's climates are to be found in Australia. But few people have built homes in these climatic extremes. However, the range between the southern capitals and tropical northern towns has been sufficient to produce two entirely different geographic types. One was the southern villa, bottled up, introverted, its thick walls storing the comfort of mild weather through occasional hot or cold spells. The other was the northern bungalow, light, open, elevated, an encircling verandah its principal living space. Between these were various compromise types, the most notable of which was the Brisbane style.

The Brisbane house developed with its body in the tropics and its head in the fashion magazines of Sydney and Melbourne. In essence, it became a southern villa built of timber and raised on stilts. No one, least of all Brisbane's builders, could agree on the reason for the stilts.

Serious domestic building began in Brisbane, as it had in Sydney some twenty-five years earlier, with low, wide, sheltered homesteads surveying their rolling estates from central hilltops. The pioneers, mopping their brows in the fierce heat, had no trace of the love for the climate which was to develop with later native-born Queenslanders. Their buildings fought the sun. Stone from beneath the town or handmade bricks formed their thick walls to a plan already tested in Sydney; slate or shingle roofs extended over a deep verandah, narrow pairs of french windows, louvred shutters, carved Georgian fanlight and sidelights to the front door, fretwork at the verandah edge. Inside the sun was forbidden. The house was cool, dark and essentially escapist.

The change from this attitude to one of wholehearted participation in the weather began involuntarily when the lush river flats were opened to small farmers. Stone and brick were not the materials for men building their own cottages between milking times. The best building timber in Australia was abundant and there was little fire risk in summer, which was the wet season. When frame structure was adopted, the idea of insulation had to be forsaken. Instead the house became thin and free, relying on the passage of air for coolness. It became little more than a sunshade, and if its slight bulk heated in the morning it cooled as quickly in the evening.

The principal original reasons for elevating the house appeared to number five:[1] (1) The pioneers, building on the Brisbane River flats, raised their houses above flood danger. (2) Even when the ground was free of flood danger, there was an ample supply of long straight timber for stumps and the sub-floor area thus provided was useful for storage. (3) Most building sites near the city sloped steeply and tall stumps were in any case necessary on the low side. (4) The activities of the white ants in flooring timbers could be observed. (5) The sub-floor area was a valuable cool spot both for work and relaxation, and was particularly useful for hanging food-safes. It was further suggested that air circulation under the house cooled the rooms and, rather less convincingly, that mosquitoes did not fly higher than fifteen feet from their breeding ground.

Brisbane was not a wealthy city. The profits from most of its commercial and industrial enterprises returned to the southern cities which sponsored them. There was no class of rich merchants comparable to those of Sydney or Melbourne out to impress the neighbourhood with the scale and magnificence of their homes. With few exceptions, professional men were the highest earners and the builders of the best houses. Doctors were the aristocracy. Even they were inclined to spend more on yachts, and later cars, than they spent on their houses. The climate encouraged a year-round outdoor life, looser clothes and less formality than in the south. Home entertainment was never so highly developed and house-proudness was rare. The builders were mostly carpenters with one or two helpers. There was no great stimulus to question the stumps or to enter with any gusto the southern fashion race.

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[1] The Queensland Bureau of Industry, conducting a Public Opinion enquiry in August 1944, discovered "nearly fifty distinct reasons for . . . high stumps". Of 640 repliers to a questionnaire, 334 favoured "utilization of the space underneath for laundry", 113 for wet-weather drying, 64 for children's play; others favoured storage, work, or summer living. At the same time 174 claimed "climatic advantages such as greater coolness", 43 claimed avoidance of damp, 40 claimed other wet weather advantages, and 17 claimed "freedom from ants and crawling insects". Only 20 claimed that the reason for raising the house was "for inspection of stumps and control of white ants". The survey indicated that, "in all areas except Brisbane, houses on stumps 6 ft. or more in height are becoming more popular; 56% of housewives preferred such houses, compared with 39% who have them at present. Along the tropical coast, 75% prefer high stumps."

So the north Australian vernacular developed. All the single-storey stock plans — the bungalow, the asymmetrical front and the homestead — elevated on their stumps, went through their own wooden, chimneyless adaptation of the cycle of twentieth-century styles. About 1900 a sub-tropical Queen Anne appeared, tiles replacing the traditional galvanized iron and an additional gable or two breaking the plain pyramidal roof. French Grotesque griffins sometimes capped the ridge.

In 1920, the Californian bungalow was adapted, the roof reverting to iron and dropping a little lower in pitch. The chunky details and exposed framing of the period were joyfully affected by northern builders, but the essential earthbound horizontality of the Californian style was difficult to achieve on stilts. However, the heavy pylon pier on either side of the front porch in this southern style was mocked in weatherboard and some effort was made to link the house with the ground by filling the gaps between the creosoted stumps. This was accomplished most cheaply and efficiently with lattice.

The north Australian house could not readily adopt the Spanish Mission, essentially a masonry and stucco style, but it made a half-hearted effort at the Elizabethan in the middle 1930's, striping white asbestos-cement gable ends with black boards in a half-timber effect. Early in World War II, in a pessimistic gesture to Internationalism, it turned a few windows around the nearest corner. At the same time, in company with southern houses, it often lost the front verandah and substituted a small porch outside the entrance door.

After 1945 the speculative builder marked time. The State Housing Commission remained ten years or so behind him by omitting the timid revolutionary elements of the last style. In the brown, treeless rows of 1,000-square-feet cottages on its housing estates, the Queensland government gave the North Australian Traditional an official blessing. But meanwhile, the younger architects of Brisbane were doing their best to strangle it.

From the 1920's onward, there had been sporadic individual revolts against the traditional pattern, in nearly every case instigated by a business-man or an architect from Sydney or Melbourne. Robin S. Dods, the only serious architect to work on Brisbane houses before World War I, was the outstanding exception. He was a Brisbane boy, schooled in Brisbane, then in Switzerland, then in Scotland. He served articles in London and spent the early years of practice passing between Britain and Brisbane. Finally, success in a competition for the Nurses' Home at Brisbane Hospital held him there. In this city he also built several offices and churches, but forty years later he was remembered by Brisbane people for his houses. They were big, generous, easily planned. Every one was cool and comfortable, for he studied temperature control carefully. He invented various systems of adjustable vertical louvres to fit between the balustrades and eaves on the wide verandahs' edges. He pitched the roof comparatively high, usually in a plain hip, and provided various means of ventilation to the big roof space. His stylistic approach was American Colonial, greatly admired by his American wife, but his manner was unaffected and sensible for a climate which he once described as being "so mild that almost any shelter will suffice".

He was one of the first to propose an easier life for twentieth-century housewives by means of communal working facilities. He suggested, in a special number of *Art in Australia* in 1919, houses shorn of dining-rooms and offices and planned in a crescent "with a connecting way or pergola, and a central building containing a dining hall, recreation rooms, maids' and housekeepers' quarters, a kitchen, a well-equipped laundry, and all the necessary appurtenances. Each house, having its own pantry and its own private garden could retain the possibilities of much of that inner personal life which is so reluctantly sacrificed in flat or boarding house." Dods went to Sydney in 1913 and practised with the firm Spains, Cosh and Dods for seven years until his death, in his early sixties.

After Dods left the north, two architects from Melbourne, Trewern and Rylands, directed fashion in Brisbane's smart suburb of Ascot. Between the two wars they introduced the solid earth-bound brick structure, the southern two-storey plan with bedrooms upstairs, and even the externally featured chimney, which was usually false. These houses started a little school of Spanish Mission and Jazz brick, but there was no hint of a popular development of these styles such as had occurred in the south. This was merely the eclecticism of the privileged.

But after World War II, Brisbane's small-home builders began to be more conscious of effect. Inevitably they looked south. Soon there was little difference between the dreams of the urban home-seeker in northern Brisbane and those of the home-seeker in Hobart on the nation's southern tip. Each saw a white L-shaped cottage with a moderate number of windows and a small front porch. One variation remained. While the southerner imagined sun streaming in the windows, the northerner saw the plan in reverse and a cool northeasterly breeze flapping the curtains. The great deviations from the Sydney mean which had appeared in the 1850's had been ironed out. In the north the summer was still as trying, and every housewife who could afford to indulged in the habit of a siesta. In the south the winter was still wet and cold for days, and fires or radiators were necessary, if not always available, in every room. But no climatic difference was great enough to sustain any basic difference in popular building for long after the introduction of the electric refrigerator and high-powered advertising of manufactured insulating materials.

Research results at Sydney's Commonwealth Experimental Building Station after World War II seemed to justify some of this unscientific sympathy of popular buildings. The majority of white Australians lived in towns under a fairly regularly blue sky on, or comparatively near, the coast. The factors which brought relief in the hotter parts — a ventilated roof space, insulated ceilings and walls, cross-ventilated rooms, hooded windows — were equally effective in the milder southern summers and did not adversely affect the ability of the southern house to keep warm in winter. As for the elevated floor, the research station disparaged it. "On discomfort grounds it is not material whether the spaces under ground floors are enclosed or not" in hot humid climates, and "should be enclosed to reduce air movement to a minimum" in hot arid climates. For the latter condition, the station suggested, in 1949, composite construction: living-rooms of heavy masonry to maintain low day-temperatures, bedrooms of light frame construction to cool quickly when they were to be used after the hot sun had left them. But in the far north the elevated, square, shaded bungalow, with bright tropical plants against its latticed foundation, was firmly established as a part of tropical Australian life. It had withstood a century of stylistic temptations. No doubt it would resist many decades of scientific recommendations.

The year 1950 was introduced by a record heat-wave with day shade temperatures above 120° in some inland New South Wales and Queensland towns. This was unusual, but the inhabitants of the inland areas were used to long spells above 110°, with bore water too hot to drink and iron roofs too hot to sleep under. In 1923-4, Marble Bar in Western Australia, the hottest town, was never cooler than 100° for 160 consecutive days. Such heat could hardly be reduced to a level of comfort conducive to fastidious home-making by simple structural means. It seemed to demand of the twentieth century some mechanical method of cooling, which was not available for the ordinary home by the early 1950's.

Within the southern villa style there were minor variations caused at least in part by regional geographic and climatic conditions. Sometimes local materials combined with a social condition to form a regional style, as in Warrandyte, Victoria. A paintable place where wattles and gums crowded the steep banks of the Yarra, Warrandyte was publicized as "the artists' paradise" to thousands of week-end trippers. A few artists did live there, and in nearby Eltham. They had little money for building and they liked rustic simplicity. They looked to the earth for materials. Early in the twentieth century they revived wattle-and-dab, pisé and wood-slab structural techniques. The local shire council was one of the very few near the metropolis prepared to approve consolidated earth construction. After 1945 many suburban home-seekers were intrigued by the idea of overcoming the material shortages with bricks taken from their own ground. They moved to this district, which was in fairly easy commuting distance of Melbourne. More or less consciously these builders followed the lines set down by the artists. Adobe was developed at Eltham by Alistair Knox in imaginative forms: notably in his "Periwinkle" house, whose plan was based on a spiral. A Warrandyte Style developed, a neo-Californian bungalow style; rubble stone and adobe blocks, vertical boarded walls, shed roofs, sudden studio-like windows — a somewhat nostalgic bushlands atmosphere, plus plumbing. Fritz Janeba and Robert A. Eggleston were among the architects who gave direction to this movement.

On holiday grounds near all the big cities, another house type was familiar, somewhere between Warrandyte and suburban style, consistent enough at times to form an apparent local idiom. In another area near Melbourne, the Mornington Peninsula, holiday characteristics were so strongly implanted in the early days that they survived after the district began to be engulfed by suburbia. A bent isosceles triangle extending for some fifty miles, with the southern fringe of Melbourne's suburbs as its base, the Peninsula was the principal holiday resort for all classes of Melbourne's population for nearly a century. Its western foreshore to Port Phillip Bay was also the testing ground for most progressive moves in domestic building in Victoria. Nearly every architect of note who worked in Melbourne built a house there at some time. And in most cases they allowed themselves to experiment, to be freer and easier than was their custom in the city. That some of these experiments took place on the Peninsula and not in the suburbs was only a coincidence of their commission, but many of them undoubtedly were influenced by the holiday mood. From the days of the earliest look-outs and kiosks on the high cliffs above the sea, a simpler, gayer approach to the architectural rules of the day was apparent. From the 1870's, the Peninsula learned to use timber in a light, open frame without feeling the need to imitate masonry. It discovered the possibilities of outdoor living and discarded much of the heavy stylism of the suburbs. It was natural, enjoying the sunshine some fifty years before the suburbs came to appreciate it.

Here, in 1912, George Higgins built Australia's first all-concrete house. Here in the twenties Walter Burley Griffin built his square houses with central living areas and partly enclosed sleeping bays. Here in the thirties, Roy Grounds brought the kitchen into the living-room for the first time. In the forties, Seabrook and Fildes took a leading hand in rebuilding parts which had been devastated in a scrub fire. They used open plans, glass walls, flat and monopitch roofs in much the same way as many other architects in other parts of Australia used them, but five years in advance. The holiday characteristics were beginning to be absorbed by permanent residences.

After the war, Beaumaris, at the base of the Peninsula, was one of the few picturesque places near Melbourne with land available for building. It was invaded by the new generation of architects, including Neil Clerehan; Mockridge, Stahle & Mitchell; John and Phyllis Murphy; J. F. Spears. From Beaumaris, now an established suburb, to Portsea at the entrance to the Bay, white walls, vertical boards, low roofs and wide eaves appeared.

Soon well over a hundred sensible new small houses could be counted in the area. About sixty per cent of the many buildings under construction carried on the principle. They were simply planned and innocent of applied ornament or obvious stylism. By no means all of these were the work of architects. The rational approach to building here seemed to be accepted by the public and even by the designing builder. This fact received some recognition in the real-estate market. In 1949 Spencer Jackson, a big, publicity-wise land agency, illustrated its advertisements for suburban properties with sketches of the typical conventional triple-fronted villa, but it depicted the Mornington Peninsula house with a two-level skillion roof and relevant details. Monopitch, flat or low-pitched gable roofs were indeed as familiar here as wrought-iron, tapestry bricks, and mottled Marseilles-pattern tiles in the inner suburbs.

In most other big towns after 1945 a number of progressive architects more or less simultaneously discovered a nearby picturesque area that had previously been neglected. They converged on it, built their own homes and attracted progressive laymen to commission them to build more.

In Gordon and Killara, Sydney, where great outcrops and white gums broke the steep ground, there were three of the four houses which won the Sulman Award.[2] Each of these three houses was designed by an architect for himself — by Gerard H. B. McDonnell, Sydney Ancher and Albert H. A. Hanson respectively. Ancher's house, behind a stretch of glass on to an 80 ft. long easterly terrace, was perhaps the most photographed post-war building. Gradually the area began to assimilate the character of these architects' work.

In Perth, an area of magnificent building sites was brought to the attention of adventurous home-builders in 1947 when Vernon Leach began building his own house on a steep cliff of Mosman Bay (Marshall Clifton & Leach, architects). The area had been neglected previously. It laboured under the popular impression that it was too steep for building and under the name of Mon Repos. Leach's house used oiled timber, a despised material in Perth, and introduced to Western Australia the stylized low-pitched skillion roof.

In St. Lucia, Brisbane, the most remarkable architect-instigated revolution occurred. By 1950 this area contained not merely the greatest concentration of progressive buildings in Brisbane: it had nearly every progressive building in the state. St. Lucia had attracted the younger architects after the war for obvious reasons. It was high, richly wooded and unexploited. Most sites surveyed a wide view of the twisting Brisbane River. They sold for a few hundred pounds each, despite the fact that they were within three miles of the city. An architects' colony grew up. They built for themselves and their clients in a manner seldom seen before in Brisbane. The traditional elevated timber house was lost. It was not always replaced by something more logical or more suitable for the climate. Awake to the obsolescence of standard Brisbane building practice, some of the architects and most of their clients looked to the south for inspiration. Some looked no further than Sydney, many passed on to Melbourne. Heavy brick walls and hipped Marseilles-tile roofs replaced timber and iron, false fire-places and chimneys were added, and the houses dropped to the ground. Much of St. Lucia began to look like a Melbourne suburb.

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[2] Founded by Sir John Sulman, and awarded every year since 1934 to the most meritorious building in New South Wales, every fourth year in the domestic class; buildings are judged by a jury of architects and artists.

But some of the architects were not concerned with southern stylism. They were looking back into Brisbane's past, trying to return to first principles. Some of them decided that the raised floor had its advantages, after all. The post-war building regulations limited the area of new houses but put no restrictions on the area of open sub-floor space. Hayes and Scott were among the first with a reasonable compromise. They built some houses with concrete-framed, partly enclosed, utility ground-floors. The main floor was framed in timber or built in brick on the concrete slab. These architects added new colour to the grey iron and creosoted stumps of the bleached Brisbane suburbs. Peter Newell, a Melbourne-trained architect, introduced the Victorian practice of painting the new brick walls. White, blinding in Queensland's sun, was rarely used. Pale pinks, greys, light and dark olive greens in broad floods of paint soon made St. Lucia one of Australia's most colourful suburbs.

In the matter of environmental influences on architecture, Canberra stood as a unique exhibit. Here were all the conflicting impulses of the turbulent second quarter of the twentieth century, and they were isolated from all past periods of Australian building. Here Australia started early in the century with a clean slate and the magnificent idea of building a faultless city as her capital. She would call a world competition for the best plan; she would insist on the finest architecture.

By 1950 the lonely valley had grown into a little city, but not quite as planned. Some time before then the shimmering image of a practical Shangri-la had been shattered by thousands of forbidding, pretentious, competitive villas. The Australian domestic ideal had proved too strong for the idea of building in the common cause. Instead it had produced the familiar variegation of a typically Australian suburb – thousands of average houses, very few really good and few really bad.

Canberra was not careless. Unlike other Australian towns, she was the pride of her citizens. Unlike most Australian citizens, they were determined to keep their city beautiful and were resentful of neighbours who appeared to be lowering the standards. Thus, when such a thing as a flat roof or an unfamiliar colour-scheme was suggested, it was in greater danger of being taken as an affront to the high red-roofed neighbourhood.

Unlike most other Australian towns, Canberra was meant to be pretty. Every building there was intended to look its best. There was no escaping this fact; there could be no excuses for the result. It was deliberate. It was intended to look the way it did – not by its planners, their eyes perhaps a little dazzled by the strong light of central New South Wales – but by the common man to whom the new capital of the Commonwealth was dedicated. This was Australia.

This time there could be no blaming the pioneers or the lack of early planning; the town had been born with a silver spoon in its mouth. In 1912 Walter Burley Griffin and his wife won the international competition,[3] with a plan as imaginative and spectacular as that of any town in the old or new worlds. But only one year later the dream began to be disturbed. The Griffins arrived from U.S.A. in 1913 at the invitation of the Commonwealth government, which had meanwhile sanctioned departmental redrawing of the Griffin plan. There was immediate conflict. Griffin, gentle and generous in everyday dealings, was dynamic and immovable when roused on a point of principle.

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[3] Banned by the Australian and British Institutes of Architects because of the inadequate prize money, £1,500, but entered by several notable foreigners.

Here was such a point if ever he had seen one. He was enraged at the alterations made to his plans. He argued with political heads and hammered at the stubborn face of departmental architecture. By 1918 he had managed to pull his plan back into some sort of shape and had marked a few roads on the ground. But he was tired and frustrated with the ceaseless fighting and antagonism. He believed that some offended departmental officers were quietly hindering him at every move. He could never get the statistics he wanted; the plans he required would mysteriously go astray. By 1920 he had broken with the Prime Minister, W. M. Hughes, and had left, taking with him most of the results of five years' labour on the development of the plan. Although it never satisfied him, he had succeeded in setting down the framework of a city of interlocking circuits and 60 degree angles, potentially more beautiful and stimulating than any other in Australia, but unfortunately no more flexible.

Canberra's theoretical aesthetic foundations were sound; but the idea began to weaken in the public buildings and collapsed completely in the residential districts. A minor tragedy was that Griffin himself built nothing there. The kaleidoscopic styles of the next two decades – jazz, Californian bungalow, Spanish Mission, Elizabethan – were borrowed one after another from Sydney and Melbourne. The Functionalist movement, struggling to find its feet in the same period, was not represented in housing, although its influence permeated some public buildings. At best, as in the Hotel Canberra, these public buildings were planned on a strong geometric pattern reminiscent of the town itself. At worst they were unoffending, quietly geometrical in form and decoration. They were directed from Melbourne by the Government Architect and later by the Federal Capital Commission, which gathered a staff of architects at Canberra.

In the depression, as the building programme slowed down, most of this staff drifted away. One who stayed on was Malcolm Moir. But Canberra did not have much time for architects. Most important projects were planned in Sydney or Melbourne. The biggest of all, the University, was designed by Professor Brian B. Lewis of Melbourne in 1951. By this time Moir and his architect wife had one of the only two private practices in the capital territory. Kenneth Oliphant had the other.

Fourteen years after Griffin's death, the domestic buildings in Canberra which might have given him some satisfaction were very few. He might have gained consolation from the knowledge that Canberra was the most tree-conscious city in the Commonwealth. He would have been pleased that there was a vigorous revival under the direction of Lindsay Prior of the Australian native trees which he, Griffin, had loved. But this sparse town, which had never developed the population nor caught up the pace of automobile travel for which he planned, would have destroyed any illusions of Australia which Griffin may have taken with him. The suggestion in the crowded streets of the metropolitan suburbs was confirmed in these curving avenues of florid, pretentious façades. This was Australia's taste in the period of world culture when some countries were experiencing the greatest renaissance in design since the Industrial Revolution.

The district of Toorak in the city of Prahran, an inner suburb of Melbourne, was unique in that it retained its position as a fashion centre for a century. Other residential areas in other cities had their day as magnets for money, but none other managed to cling to its respectability and its popularity for so long. In 1850, as in 1950, Melbourne's wealthy newcomers and successful merchants did not hesitate before making their homes on the steep hills of Toorak. Their sons and daughters married and built again within the area. A house here was the mark of business or professional success.

Nature was the first attraction. The first Crown Lands sale at Prahran, on 10 June 1840, opened a wide strip of rolling, country to home-builders. Its southern boundary was the theoretical Gardiner's Creek Road (later Toorak Road), its northern boundary the river Yarra Yarra. On big estates of twenty acres and more, stretching from road to river, the early merchants raised impressive residences. There was "Tivoli", a single-storey house of eleven large rooms, built by George Robinson on a rise with a magnificent view. Aborigines, of whom he had been appointed Chief Protector, carried up from the river the stones for its rubble walls. Others were "Rockley", John Howey's home, built in 1841 and demolished in 1908; "Como", partly built by Sir Hartley Williams, *c.* 1850, added to by Octavius Browne in 1853 and afterwards by Charles Henry Armytage. "Toorak House" (which gave the district its name) was built in 1850 for James Jackson, hardware merchant, and predecessor to McEwan in Elizabeth Street. Jackson had bought his land and started building in 1849. Lost at sea next year, he never lived there, but the government took the big ornate building as a governor's house.

Early settlers found the Yarra the best means of transport. Then, as the roads were improved, Toorak extended over the southern hill. One half-mile shoot from Toorak Road became known as Clendon Road, within which the romance of Toorak and, indeed, the whole unbalanced story of Melbourne home-building was condensed. Clendon Road started as a driveway swinging easily between the trees from the highest point of Toorak Road to a small single-storey house. The property changed hands and the house was removed; the twisted drive became a public road and ran on straight down the hill past another main thoroughfare, Malvern Road, and trailed off in the neighbouring municipality of Armadale.

The mansions of "Orrong" and "Millicent" were built at the Toorak Road end. Down near Malvern Road, "St. George's" (later "Mandeville Hall") was built for Alfred Watson, of Flinder's Lane. But on the other side of Malvern Road, where Clendon Road prodded the end of its elegant finger into the thin ribs of the working-class area, little terrace houses on seventeen-feet frontages were being packed together. Near Toorak Road, in the big estates, the fine gums were preserved and deciduous trees were being cultivated. At the southern end, the ground was cleared of foliage to make way for as many cheap rooms as possible. Then the "boom" broke and the big properties had to tighten their fences. New houses, not quite so large or so lavish, edged in between them. Next, investors, attracted by the address, began to pay attention to the south end. In the early 1940's blocks of middle-income group flats rose on the Malvern Road corners beside the terrace houses. Finally even the north end was ravaged by speculators.

By 1951 almost every class of domestic building was represented in Clendon Road. None of the original mansions retained considerable acreage. For years the neighbours had been biting off slices of their grounds. Red roofs could now be seen through the trees from their verandah arcades. Only one mansion managed to retain a look of aloofness, its creeper-shrouded Italianate still almost hidden from the street by the foliage of its diminishing private parkground. Another had been remodelled as a convent, another into flats. Expensive houses on smaller lots, representing the tastes and social habits of nearly every decade of the past century, sat between the mansions. At the bottom of the hill the typical three-roomed flat of the pre-World War II period was represented in a two-storey blue-brick block. The most advanced architectural thought had produced a block of bachelor flats and another of two-room business-couple apartments. Near Toorak Road in 1950-1, a cul-de-sac was driven from Clendon Road into the remains of a mansion garden, the old trees were removed and three or four typical "luxury" maisonette pair-houses of the post World War II period were set in a bald row of salmon-coloured brickwork. And at the far end, the terrace houses, overcrowded and decaying, had developed into slums.

16

Nationalism, Patriotism, Taste

DURING the years of Australia's making as a nation there were three psychological approaches to home-building, expressed by three distinct architectural types.

The first was nostalgic: the contemptuous aversion of the colonists for the primeval land, which found expression in the defiant, direct reproduction of England's buildings by Greenway and his lesser followers.

The second was escapist. The settlers recognized the quality of their new country but still had no love for it. Their homesteads were designed for Australia, but negatively. They were planned to exclude Australia with verandahs, shutters, thick walls. The nostalgia remained indoors, but in forming the exterior the designers were realistic enough to allow Georgian proportions and forms to lapse in the interests of defence against Australian elements. A window worked in one direction only – inwards. It was provided to admit just sufficient air and light to illuminate a theatrically contrived interior; it was not required for vision of a distasteful landscape.

The third was an approach of enthusiastic participation. It resulted in positive design for Australia – terraces throwing off their hoods and windows growing broader, not only for the enjoyment of the Australian sun, but to admit to the rooms as great a sweep as possible of Australian landscape.

These three approaches developed in order, with the last not becoming apparent till the beginning of the twentieth century. But even in the middle of this century, when participation was the popular mood, traces of the other two approaches were reflected in many of the more elaborate and self-conscious houses.

For a century after the gold rush, the lean, tanned Australian of the outback, creasing his eyes against the blazing sun, was one of the stock characters of the world. The surfer, the life-saver parading at Manly, the wide white beach packed with sunbathers eating ham sandwiches—these were the Australians of the newsreel and travel brochure. The visitor from overseas, expecting sun-worship, might not have been disappointed to find the windows of the Australian homes amongst the largest in the world.

It was also possible, for those who looked carefully, to find translated into domestic building the other characteristics by which the rest of the world knew the Australians. They were commonly recognized as horse-racers and sports-lovers, as resourceful soldiers and as gamblers, beer-drinkers and dry humorists. Undoubtedly all these and other smaller facets of their personality affected their appreciation of the visual arts, and therefore the shape of their houses.

In 1862, one of the first architectural philosophers[1] raised his voice to state regretfully that Australia had no national style. At a time when designers were divided into the two strict camps of the Battle of the Styles, this man was against both and was all in favour of setting up a third. The battle then raging between the Classicists and the Gothicists was fruitless, he said, but it proved one important fact: "We cannot boast a national style of building. . . . If that be our ambition, why not set about it like rational beings? Begin at the beginning, not where the Gothic or Classic architects left off." He asked if Australian architects could carry their studies no further than "selecting bits from former buildings, taking this and leaving that from all that has been done before". "Study the past", he said, "from wigwam to the pyramid, not for the sake of transplanting either to other soils, but for the purpose of ascertaining the wants, feelings and thoughts that brought them into existence. . . . Let our architects, while thinking for themselves, remember that our streets should have light, air and space, and the less they remind us of their own presence, in fancy fronts and puerile decorations, the better."

This was the voice of rational building, the artless approach to genuine style, and it was echoed at frequent intervals down the next ninety years.

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[1] "E.J." in the *Contractor's Guide,* Melbourne, 9 Aug. 1862.

Every articulate architect apparently believed he knew where the Australian style could be found. Sir John Sullivan, in 1887, advised his contemporaries to look for it "not in Gothic, a stone style developed under the misty skies of northern Europe, nor in Queen Anne, a red brick style full of quaint conceit and petty details; but rather in the broad, simple treatment of Italy. . . . It will have to be developed, however, with a difference. We are of English race, and love light and air; hence window spacing must be larger. Labour is dear; hence we cannot luxuriate in the thick walls and vaulted ceilings of Italian houses. Slates and iron are our roof coverings, in lieu of heavy Roman tiles, and verandahs or loggias we must have to a far greater extent than in Italy. . . . The first step in advance must be the recognition of the verandah as a portion of the whole design, and indeed, when properly treated, as its leading feature."

W. A. M. Blackett advised in 1922 that designers might well continue in the Old Colonial tradition, "blending it with more direct Mediterranean influences of the simpler type, and thus work towards a style racially and climatically suitable to our environment". (This, he pointed out, would also avoid "over-rampant" individualism in design.) In the late twenties and the thirties many voices joined the call for a national style.

Every reformer restated the same problem. There was no Australian architectural character, nothing natural or spontaneous or typical, only a jumble of European cast-offs. They appeared to agree that this poor state of affairs should be remedied as soon as possible by deliberate encouragement of local colour in building.

If what all these theorists said had been quite true, if there had been no Australian style, the architectural millennium which they all envisaged in various shapes might have been nearer. But their premise was not strictly correct. When they said there was no national style, they meant that there was none to which they, as architects, could subscribe. In fact, there was an Australian national style almost from the start of building, and it was never stronger than in the late 1930's when the lament for its absence was loudest. It was not a style of which anyone could be proud, but possibly it was all the stronger for that. To deny that the Australian had a national building type was no more reasonable than to deny him a national style of speech, yet many learned people who chuckled indulgently at the expressive, improper phraseology of the Digger refused to consider the same characteristics in his home buildings.

If a student sought to find an Australian national building style by examining churches, offices, public buildings and theatres, he would have been no more successful than if he had listened for Australian slang in a King's Birthday address at a suburban fathers' meeting. Such buildings, like most fathers on such occasions, were on their best behaviour. They were not the same at home. If the student wished to isolate Australian taste in the 1940's, for instance, he followed the father, after the last flashlight had ended the meeting, away from the architects, down the quiet street lined with red roofs, past the continuous fence which transformed itself every fifty feet, through a garden where nothing grew higher than a gardener's clippers would reach, and on to a porch, surely too large to be only a shelter for the door, yet apparently too small to take a chair.

On the left side of the porch a stubby wing of the house projected some eight feet towards the street. This was the master's bedroom, and if the student had left him for a moment and paced the distance, he would have found that the front window behind which the master slept was exactly twenty-five feet from the front fence. On the right, level with the porch, was another window — two double-hung lights separated by a plain sheet of glass — behind which was the faded pattern of a cottage-weave curtain and a coloured dog patiently examining the garden through black china eyes.

The dull red glow of brick walls was relieved at the windows and on the narrow battened soffit of the eaves with paint of a rich creamy-biscuit hue. It was this colour, only hinted at in the external paintwork, which burst upon the student when the door was opened and he passed into the hall. Cream-washed plaster walls rose from the leafy Axminster carpet to the varnished picture rail. The upper part of the walls and the ceiling was a lighter cream, the doors and cupboards were darker cream. In the kitchen, even the Australian mass-produced stove and refrigerator would be finished in the same thick edible hue, but the student did not need to go further than the entrance hall. Down a short passage ahead he could see the doors which gave on to the bedrooms and, at the end, the tiled and spotless bathroom. To find the Australian national style he needed only to look between the horizontal bars of the twin glass doors to the lounge room on the right. As the faint smell of tomato sauce drifted in from the kitchen he saw the family sinking into the clinging depths of a Genoa velvet three-piece lounge suite. On the cream walls were two water-colours set in wide light-cream mounts and narrow gilt frames. Above the tapestry-brick fire-place was a wide, thick shelf with a fluted edge and set with a few coloured empty vases, a framed wedding photograph and a silvered blown-glass bird. Two rows of books sat tightly fitted in a walnut case. Three glass shells sprang out of a chromium rod which hung from the centre of the ceiling. A wide shade on the reading lamp showed a country landscape subtly tinted on the parchment, contrasted by a nautical scene sandblasted on the glass of two small, high windows on either side of the fire-place. A peach-toned oval mirror with a scalloped edge was fixed between these windows. On the glass top of a nest of wrought-iron framed tables stood a tall bowl of Iceland poppies.

This was the house described by any real estate agent of the 1940's as an ultra-modern villa. Without a doubt it was the national style of that period. Any man or woman who lived in an Australian city in those years could have been turned round three times in space and, on being dropped in such a room, would have been at home and at rest.

When the student left the 1940 father knocking out his pipe into a smokers' stand of chromium and black plastic, and stepped back half a century, he found a very different style, but basically the same approach and the same room. In the

1880's he noted coloured glass leadlights, doors painted in mock oak graining, a big wood and tile mantelpiece crowded with ornaments, floral wall-paper, rich bronze gas brackets, wax fruit under glass on a stem-legged table – all the paraphernalia of Victorian England – but set within a room of the size he had left, in the same corner of the same plan, in a house still dark-walled and red-roofed, in the same garden, the same distance from the same street of rhythmic fifty-feet variations.

Architectural style in Australia had little or nothing to do with the geographical, geological, or climatic influences on building. Style was merely the form which the common taste took at different periods. It was Australia-wide in action, adopted everywhere regardless of physical conditions. The heat of Western Australia and the cold of Tasmania, the timber of Queensland and the stone of South Australia, all produced Renaissance, Queen Anne or Spanish Mission more or less simultaneously.

Primitive buildings – the natural shelters thrown together in haste by men without a care for appearances – varied greatly across the continent, but whenever visual effect began to be considered by the builder and style was introduced, the geographical influences were curbed and the native materials were cramped into a national pattern.

The changes of style generally originated in the economic capital. Thus Sydney led for the first half of the nineteenth century, passing on to Tasmania and to some extent the other colonies, first its use of freestone in simple Georgian forms, later the practice of stucco rendering on brickwork. Then Melbourne, after the gold boom, became the unofficial arbiter of fashion to the whole country.

Each popular architectural style – English, Californian, Spanish and so on – in turn fell lightly on the shoulders of the five-roomed single-storied house and was as lightly cast aside. To this extent these historical styles were adapted to Australia – adapted to the street of fifty-feet allotments, to the shorn garden, the asymmetrical box plan, the front lounge room, and to the timber and iron of the north and west as well as to the brick and tiles of the busier south-east.

So long as style was taken in its narrow architectural sense, it could not be said that the national characteristics exhibited by the small houses were weaker because the forms were adapted from overseas patterns. Just as Greece made up a style for a spectacular society by translating and expanding oriental timber forms into stone, so Australia made her style by scaling down to the separate castles of the common man every passing fashion of commercial exhibitionism in the industrial age.

Scale was not all; from the earliest days habits appeared which were as characteristically Australian as the later use of the cream colour where other nations would use white.

There were the gardens, invariably in reverse to the English tradition; neat flower beds and lawn squares in front for all to admire, a wilder and generally unused 'back-yard'.

There was the stress laid on sanitary arrangements — the separate laundry compartment in every house, the w.c. with doors opening from outside as well as inside, so that it could be approached without obstacles from any quarter, and the separate shower cubicle.

There was dissatisfaction with nature. The Australian home-builder found no place for her within the paling fences of his lot. He destroyed every native tree, planted one or two disciplined English saplings and trimmed the grass, the hedge and shrubs into geometric shapes. With this went a distaste for rough texture and a love of the smooth and shiny. The best path was cement, the best wall was plastered, the best carpet was Axminster. Woolly, woody or granular things were never really favoured. Even the back-to-nature movement of the 1920's was disciplined within a few years to conventional symbols of naturalism.

There was the universal application of the Marseilles-pattern tile, an adopted product which was more faithfully and sentimentally regarded than any local material. After their popular acceptance in the mid-eighties the French tiles, discarded to the lowly utility building in their home town, became in the country of their adoption the only polite covering for a home. They were used, not in the spirit of a manufactured product with certain applications and inherent limitations, but as a basic material to be turned to any shape required by fashion. They were pitched at 45 degrees from the horizontal in the Queen Anne period, at 70 degrees for Tudor styles, at 17 degrees for Californian bungalows, and later compromised at what the manufacturers considered a safe angle, 27 degrees, during the down-to-earth 1940's.

The most marked characteristic of the Australian taste probably was its unashamed superficiality, a result of the Australian national tendency to place an unusual degree of importance on small incidental details. This tendency had produced national practices in activities other than building. In dress, the Australian woman was constantly being harangued by stylists for wearing too many accessories while overlooking the finer points of the current mode's patterning. The Australian male selected his new suit on the quality of finish alone. He admired a well-stitched lining; he marked as a beautifully tailored job the suit which, despite an atrocious cut, had an extra fob pocket. He was never concerned with line or form, beyond noting subconsciously that the man who displayed such concern in his dressing was probably dangerously effeminate.

The idea, the pattern, the plan, did not interest the Australian home-builder; the architectural details were all-important. A building was Gothic if one front window had a pointed arch; it was modern if the window was placed at the corner. The adaptation of every passing architectural revival to the Australian cottage was performed in each case merely by remaking the face. The plan and structure behind were virtually unaffected and would have been allowed free reign to develop themselves, had they wished. As it happened, about the only significant lasting change in the plan produced by a century of social progress was the addition of a bathroom and the subtraction of a maid's room.

There was a sort of earthy functionalism about this national style. Red bricks were favoured because they required no maintenance. Cream paint did not show finger marks as clearly as white. A floral pattern on the carpet disguised dirty footprints. A picture rail, though seldom used, formed a break on the wall which permitted the fibrous-plasterer to reduce the thickness of his sheet above head-height. The Australian workman was always quick to notice the short-cut. No architectural effect was fashionable for long unless it proved to save labour or materials. The "boxed" eave, with its horizontal soffit carried back to the wall from the gutter line, became almost universal after 1935 because it saved a few courses of brickwork. The popularity of the tile roof was largely due to the fact that it looked heavy, imposing, and more expensive and therefore a better investment than other roofs. The attic room never lost its appeal for the same reason; it added importance to the roof. The attention given to the roof in all periods was symptomatic of this perverted Functionalism. Any addition that made the house look more expensive was worthwhile, for the Australian bread-winner tended to plan not so much for his own enjoyment, or even to excite his neighbour's admiration, as for eventual sale. Any small extras spent on the roof or front porch could be classed as a good investment, because they could be counted on to raise disproportionately the offers of potential buyers. The Australian did not intend to sell the house, but he was conditioned, by a century of recurring economic collapses, to remember always that if bad times came this factor would be important.

The practice of brick veneer construction (the 4½ in. brick wall in place of weatherboards on a timber house) owed its existence to this attitude. It began in Melbourne in the 1930's and was greatly stimulated by post-war cost rises. Maintenance of the brick veneer was certainly less than that required for a weatherboard wall, but this one practical argument in its favour would not have been sufficient. Most people adopted it frankly as a counterfeit, a clever deception whereby they could make their timber home look as substantial and red-faced as an expensive brick one. In other states where the difference in cost between timber and brick construction was not so pronounced, the deception was not warranted and the practice was never generally adopted.

The architects' pains to achieve lightness of finish were not sympathetically received. A post 4 in. square might support the verandah, but a post 8 in. square cost so little more and made the house look more dependable. Cover-straps and fascia-boards were used abundantly. The workman never thought in terms of structural material; he worked and thought in finishes. A brick wall was something whose prime function was to carry plaster. A timber frame could take any form because a wall-board would cover it and a beading or a quadrant mould could always be found to fill the gaps.

The Australian's attitude to architectural style was roughly the same as his attitude to authority—disrespectful awe. He acknowledged the attractions of style as reluctantly as he accepted the presence of majors when he was in the army, as resignedly as he accepted his boss at work. But he never gave up the idea that he could trick style in much the same way as he used to trick his officers with a forged leave-pass. He noted the visual appeal of some carefully stylized building and set out to achieve the same effect by surreptitious faking. When shutters were demanded by a passing architectural style, he made an effect of shutters by pinning boards beside his windows. When the flat roof became the mark of modernism in the 1930's, he devised ways of showing a flat roof to the street while retaining the convention of the tile roof over the greater part of the house. Thus, he believed, he had embraced the new while retaining the best of the old. Again, with the cantilever, the Australian sensed the importance of this motif to the smart commercial buildings of the 1930's. He achieved an effect of cantilever with a little unstable concrete slab perched over the front door and with a corner window or two near the street.

The ties of Empire at times affected Australian taste. Nothing that originated far from the motherland could be popular for long. "Australia for Australians and Australians for the Empire", quoted George Sydney Jones of the New South Wales Architects Institute in 1923, and he added, "The Institute is endeavouring to do its part to foster that spirit in architecture". Hardy Wilson's aim to infuse oriental forms into the Australian house appeared to be discredited once and for all after Pearl Harbour.

The bitter argument between the Gothic and Classic Schools of the middle nineteenth century was often complicated by the introduction of patriotic issues. The Imperialists were the Gothicists, staunchly advocating that nothing but "English" styles be transplanted to her new colonies. Less fervent patriots held that Italian styles were logically, and climatically, more suited to Australia. It was a conflict of heredity and environment, and heredity won, at least for twenty years. Although Gothic left the house after 1870, it never entirely disappeared. Nearly all churches were based on Gothic, and its perpendicular motif was also continually creeping into the façades of commercial city buildings. As late as 1939 many conservative designers lived in daily hope of a swing of the pendulum that would touch again the romantic lines of mediaeval England. "It must return", they used to say, "it's in the blood of our people".

The same kind of nostalgia took a different form in the half-timbered effects of 1935. These started as a commercial device, capitalizing the love of "the old country"—the thatched cottage in England's green and pleasant valleys—but here the thatch changed to Marseilles tiles. The theme soon spread to the houses, but as soon departed, possibly because it was irreconcilable with windows adequate to receive the Australian sun.

The identification of Australian with English building died hard. Early pleas by nineteenth-century architects for better design frequently included advice to the young that if they searched the "English" building traditions they would find the "genuine" answers for Australia. As late as 1908 Robert Haddon, the strangely unpredictable radical, wrote in *Australian Domestic Architecture*: "The British are a conservative people, in spite of liberal institutions, and rightly display in their architecture that love for the old forms which have become indestructibly interbuilt into their national architecture. These forms and precedents find their reflection in the distant lands of their colonization."

"Britain", he wrote, "truly a country of homes, offers endless fields for study and suggestive ideas in domestic architecture." He outlined some of the forms which he felt

Australians had so far neglected unduly—rude Saxon and feudal Norman castles, "the stately mansions of the Renaissance", and finally the three styles of Gothic, "which will always inspire the designer of British stock".

But all the policies, practices and theories of the men who paid for and built the houses were of little consequence against the tastes of the women for whom they built.

A sense of style—an understanding sympathy with any architectural mood—could not have been expected for many years after design consciousness had been awakened. Design consciousness in turn could develop only after several years of desire for elegance in everyday life. In the brutal early days of Australian settlement there was no room for elegance, except perhaps in a somewhat unbalanced form at the mess table of the New South Wales Corps. Even when Governor Macquarie went to Sydney, design consciousness was as rare as women in the privileged, home-building class. Women later brought this consciousness, not only in themselves; they awakened it in men who could now picture the colony as a more permanent home. In 1817, when Macquarie emancipated the convict Francis Greenway, and presented Australia with her first architectural practitioner, the country was still a wild outpost of civilization. Macquarie and Greenway had great hopes for it, but the elegant buildings they produced bore no more relation to it than did the first English sheep that were killed by the dingoes, or the first English crops that withered in the fierce sun.

For a short time before gold was found and the pattern of Australian society began to show, there was a brief period of grace in higher circles. There were elaborately appointed entertainments; the formal, measured life of England reproduced as well as possible in unsympathetic materials; the clink of champagne bottles on Venetian glass; with the heat, the dust, the hovels of the poor and the smoky-blue gum trees locked beyond shuttered windows. Style indeed, but not of Australia, and enjoyed only by a thin upper crust of the people.

Then came gold—too suddenly for elegance to survive the avalanche of wealth. It became necessary only for a building to overpower its neighbours by sheer scale and weight of ornament. This phase passed, more of necessity than desire, when the money ran out. The twentieth century brought a more balanced economy where it was possible for more people to own or rent, or buy by hire-purchase, a detached and private home. Over-abundance of ornament was no longer financially possible; but the habit of ostentation, the competitive spirit, persisted. The major consideration was to present an expensive, impressive face with the least possible outlay.

As women earned their own money and their independence, their interest in appearances developed. The working girls in shops and offices and the better-paid factory jobs began to wear smarter clothes and paint their faces into the trim lines of American film stars. English and then American coloured magazines of fashion filled the bookstalls and their advice was carefully studied. The word 'glamour', taking on its new meaning, became part of the vernacular. Working girls invariably denied, whenever it was put to them, that their interest in personal decoration was prompted by a desire to attract potential husbands. They insisted that they chose clothes to please themselves, or perhaps to impress other girls. Whatever the stimulus, the working girl was style-conscious and, as far as she went, wise in the ways of decoration. But the working girl did not build a home; and from the moment that she first met the man of her choice, the Australian woman began a slow process which she called settling down. So that even before she married, while she was discussing with her fiancé the home in which they would live, she was picturing herself as the solid, dutiful, jam-making, dish-washing mother. She was preparing for a life without the graces. She appeared to agree with her fiancé and the music-hall comedian that the state of marriage, while desirable and inevitable, marked the end of the free pleasures of living. The idea of a smartly-dressed wife was almost indecent. The American conception of a glamorous mother was always a rather risqué novelty in most Australian circles.

The most that the Australian women expected of her house was that it be convenient for her cooking and baby-bathing routine and that it would look as if it cost a great deal more than the money her husband would be able to scrape together.

The house-decoration sections of the American magazines did not seriously interest her. In the down-to-earth business of choosing a home, she was not prepared to take their advice as she had on the frivolous subject of clothes. The technicalities involved frightened her. She was prepared to accept the builder's or estate agent's word that any deviation from current practice would be impossible. So although women were the spur and their husbands automatically handed them the choice of design, in the long run it was the builder and the estate agent, free of female interference, who developed the small Australian house.

It was usually the untutored designing builder or manufacturer who added the fancy porches, the ornamental window bars and the strange patterns of mixed bricks, without any specific order from the woman who was nominally directing the design. It appeared that the builder added these touches not always because his taste or his conception of popular taste ran in these directions; such devices were sometimes convenient methods of taking the eye from inaccurate workmanship. It was actually easier, for example, to build a presentable chimney with several set-backs and changes of brick texture than to make a precise, straight stack. Better still, the owners seemed to believe it cost more. This was the sardonic nature of craftsmanship in the twentieth century.

The American influence on taste was powerful, but it never succeeded in turning the head of the Australian house. About 1925 the commercial arts of the world began to split into two schools, the Continentals concentrating on subtle ideas simply expressed, the Americans concerning themselves more with elaborate presentation. England tended to flounder between the two at first, but later allied herself with the Continentals. Australia, meanwhile, bewildered by the indecision of her traditional leader, began to look to America for inspiration. Her posters, magazine covers, shop windows and the other media of visual publicity began to ape American technique. Frequently American designs were lifted without any apparent alteration.

Until the early 1930's American influence travelled to Australia by way of England. The first popular music heard on Australian radios was played by English bands. But after 1935 most recordings came direct from America. Australian youth had some strong semi-intellectual "jazz clubs"; but the dance-hall bands thumped out a conservative, jogging version of the American. This achieved no more than equality with the "Old Time" dances in the popular halls to which thousands flocked every Saturday night. For dancing was a serious sport, the better appreciated when many participated. The American accent on intimacy in the dance was accepted only conditionally; the latest hit tune from the States never could beat a lusty community version of "Roll Out the Barrell". In such ways the Australian preserved a somewhat "folksy" provincialism even in the big cities.

More and more of the articles and practices which the Australian used in everyday life came from the U.S.A. or were copied from an American model. The films the Australian saw and the magazines and books he read told of the American way of life. Some of the details amused him and he imitated them, but instinctively he rejected the high-pressure of Americanism as something foreign to Australia, and to the British way of life. Cars, stoves, refrigerators and other household appliances bore something of the heavily-sheathed, well-fed American look, but the house in which the Australian kept them remained true to the traditions formed in colonial days.

The white clap-board American Colonial cottage, familiar in films and magazines and readily capable of adaptation to Australia, was not at any time considered by the ordinary builder. Yet this American Colonial house should have appealed, in theory, at least, to a great number of Australians, for advertisements and posters which included an illustration of a home frequently showed a rose-enshrouded and un-Australian Cape Cod cottage.

A measure of the depth of American influence could be found in the work of the men who selected the trade titles of consumers' goods. Such names as "The New Yorker", "The Manhattan", "Bronx" or "Fifth Avenue" were applied to cheaper catch lines, cosmetics, gadgets, and teen-age underwear. Any product of a more permanent and costly character tended to bear a name like "The London" or "Britannia" and to carry a trademark involving a rampant lion. American influence was strongest in Sydney. During World War II thousands of American soldiers spent many months in every capital. They were never really at ease in the stiff southern cities. They adopted Brisbane, and temporarily reshaped it to their own liking. But it was from Sydney that they could write back to the folks, "here it is just like home". In Sydney's hotels, flats and some harbour-side houses they found more juke-box style than they had encountered in all the milk-bars of other cities.

The colonial demand for exotic elegance remained in the homes of the affluent. A society architect was usually employed for the larger house. Frequently both he and the wife of the owner had several suggestions on stylistic details, many different ideas sometimes being combined on the one house. Thus, in the expensive homes of the twentieth century there was no coherent development through a succession of styles as there had been in the nineteenth century. Architects jumped hot-foot from Tudor to Italian Renaissance, to Modernistic, to Feudalistic and back again. The principal object was that the house be unique in its street. This settled which style would be affected on any given building site, simply by subtracting all neighbouring types from the great pool of architectural history. These buildings were not of the Australian national style. They were fastidiously finished and appointed. Above all, they were carefully and discreetly designed with an accent on appearance.

The national style was different. Its builders believed that good appearance was easily won. They held the thought of scholarly design in contempt. They formed the national taste by the automatic acceptance of their neighbour's lead in a great chain reaction.

The architectural philosophers who thought long and hard about national characteristics of building almost invariably, like the speculative builders they scorned, borrowed liberally from exotic sources. But there was a world of difference in the way they translated the symbols. The builders attached imported trifles to the stock Australian cottage plan. The philosophers took imported shapes and attached to them Australianesque trifles. Thus the building form of Italy, Spain and the Orient — countries selected for the similarity of their climate to Australia's — grew the traditional intimate verandahs as well as quaintly sculptured Australian motifs; as in Walter Richmond Butler's "Grong-Grong" in Toorak Road, Melbourne (1918), a Georgian mansion with extensive porches and elaborate gum-leaf decorations.

There was a small, third school of workers which seldom spoke about a national style. Its members went about building in the most reasonable way which occurred to them with any materials which were available. This approach led to entirely different types under the diverse social and geographical conditions of the various scattered centres of home-building. It would have been fruitless to look for consistent national style in the infrequent work of the rational architects.

17

Pipes, Wires and Wheels

AFTER 1850 each house became less and less an independent entity as it linked itself with its neighbours to share some public benefit. By 1900 nearly every man's private castle was tied to its neighbours and to every other private castle in town by two or more wires attached to its roof and by a more or less complicated tangle of pipes underground.

Left to their own resources, pioneer home-builders adopted various devices for conserving the rain for future use. Barrels beneath a bark roof were the most primitive, vast brick underground tanks the most elaborate, corrugated galvanized-iron cylindrical tanks the most familiar. But one of the first public enterprises in each Australian colony was the provision of a water supply, and the sequence of events was similar in most districts. Each colony was first sited because of some natural source of water; Sydney beside a "clear running stream", Melbourne beside the narrow Yarra where Batman picked his "place for a village". For Sydney, in 1791, they excavated 8,000-gallon dams in the bed of the stream. For Hobart, they blocked the rivulet on Mount Wellington and built an aqueduct with a line of cast-iron pipes to the city, eventually feeding the water to wells spaced throughout the streets for public use. In 1824 Sydney had water brought from the Lachlan swamp to Hyde Park, through a tunnel designed by John Busby. Here carts picked it up for delivery to the suburbs. In 1850, when the city council was authorized to construct water-works, piping to individual buildings began.

Melbourne began work on a public supply system in 1853. The Melbourne Water Commission was formed to construct a reservoir at Yan Yean, north of the city. When completed, it was claimed as "one of the largest, if not the very largest, artificial reservoirs in the world". The job of chief engineer was entrusted to Matthew Bullock Jackson, who had forged his references. Trouble developed as work proceeded. Jackson switched the blame to two contractors, Finlay and Millar, but was finally trapped by Millar. After publishing abject apologies to both men he escaped, under a heavy cloud and an assumed name and with £30,000 of public money. Water from the Yan Yean dam was first turned on in Melbourne in December, 1857.

Brisbane built a 1,000 million gallon reservoir on the upper part of Enoggera Creek in 1866. Until the early eighties Perth and most provincial cities relied on private tanks and wells. Galvanized iron was the standard roofing material in these parts, as it was always in isolated country districts. A circular galvanized-iron tank on a strutted timber stand collected the rainwater from eaves-gutters. This practice remained general in parts of Brisbane and Adelaide and in some inland cities where the supplied water was not soft enough for all purposes.

By the early nineties every capital city had some board equivalent to Sydney's Metropolitan Board formed in 1888 to organize all water supply and sewerage services in the city, with the ultimate object of including every house in its reticulation. This object was generally achieved early in the new century, but in the house-building boom after World War II the cities often grew too quickly for the pipes, and private tanks were again common on the outskirts of cities and towns.

After the provision of clean water, disposal of the dirty was the next consideration of every house. For many years everyone had to make his own arrangements. A cesspit at the back was generally favoured by country people. Townspeople tossed slops into the street. Francis Greenway was among those who suggested to Macquarie about 1817 that "a main sewer or drain should be made . . . and all persons building should be obliged to lead their drains to it, in order to avoid numerous disgusting inconveniences in future".

Sanitary accommodation in primitive periods was provided by an insecure portable privy moved from shallow hole to shallow hole. As the towns grew up, this method became impracticable. The earth-closet with removable pan, and later the water-closet, appeared in little separate buildings, sometimes under a skillion beyond the wash-room at the rear of the house. The pan of the primitive water-closet was flushed by a rainwater cistern poised above it. It discharged into a deep brick circular cesspit sunk into the ground below. Kitchen slops were sometimes led by pipe from the scullery to the same pit. Sometimes they were directed to the street channel.

By 1850 the street gutters in most cities flowed with household wastes and the secret overflows from cesspits. From the outer tentacles of each town the stream grew in volume from street to street, met with blockages at intersections, banked up and flooded over carriage ways. Eventually it found some outlet in river or sea and was finally dissipated.

Houses which had not provided themselves with cesspits were visited sporadically by municipal sanitary-disposal men. In most built-up areas narrow lanes between the backs of allotments were retained by the city for this purpose. As the land grew more valuable owners frequently cut their blocks in two, giving the rear section a frontage to the sanitary lane only. This forced the carters of night-soil, as it was called, to use the front gates. Several stories were told involving the embarrassing predicament of a hostess whose guests had to make way for a burdened council employee.

From the south side of the Melbourne Hospital in 1855 there emanated a liquid discharge, the nature of which citizens hardly liked to guess, which travelled by gutter the entire length of Swanston Street. Contemporary reports stated that its odour was still potent at Collins Street.

An epidemic of cholera threatened Melbourne in 1855. Some rights-of-way were then metalled "and freed from the abominations that formerly vegetated in them", as a reporter remarked. Covers were put on some open drains and others were flushed occasionally with water.

Public indignation against the state of sanitation was rising in the seventies. "House poison again!" cried a character in a story by Christine Bardisban. "People cannot have it both in meal and in malt. When will they learn sense, and begin with good and true foundations, and leave display alone? Ornamental architecture is all very well, but give me fresh air to breathe — not diluted stench; and pure water to drink — not a conglomeration of nastiness."

The early sewers were run under the roads past the fronts of the houses. Branch lines to the house connections were carelessly set in porous earthenware pipes. They took the shortest cut, which often enough passed under the house.

In June 1885, the Institute of Architects of New South Wales decided to take action. It started with a survey. A questionnaire was sent to each municipality asking statistics of population, housing, water and gas supply, and what valve closets, cesspits, night-soil disposal systems and so on existed. It also asked particulars of deaths from fevers and preventable diseases. The press took up the story. A conference lasting several days was held in the vestibule of the Town Hall. Speeches and exhibits given by sanitary engineers and others tried to waken public attention to the dangers of many current unsanitary practices. The public adroitly managed to resist these efforts to awaken it. The cost of the conference nearly ruined the Institute. Every speech had been recorded by a shorthand reporter, but the funds and enthusiasm had gone; they were never printed.

Night-soil removal was a flourishing public industry until the early 1890's. In one year the service cost a city of the size of Melbourne, whose area was then 85,502 acres, approximately £90,000. Every evening as dusk fell, thousands of creaking, square-framed carts crept out of municipal yards and rattled slowly past the doors of the polite houses. Dark figures hastened up the side paths, disappeared round the backs of the houses and returned at a more sober pace. One overseas visitor was outraged by meeting "a nightman on the staircase of a stately hotel, polluting the air with an abominable stench".

Open street drains remained in some parts of every town till the end of the century. In the eighties "the foul odours after dry weather" were a cause of public complaint in Brisbane, while in Melbourne, "open street channels have to carry the water from the sinks, urinals, factories, etc., to the Yarra — which has now the appearance of an open muddy sewer". After a typhoid epidemic in 1886, Melbourne municipalities hastily poured disinfectant into the drains.

Public systems of water-borne sewerage were discussed as early as 1850 in Sydney, but none operated with significant efficiency until the early eighties. Unsatisfactory water seals in the pans and poor ventilation of the mains resulted frequently in the escape of sewer gases into connected houses. There was considerable discussion on principle. In the early eighties Adelaide began work on a scheme for piping sewage from buildings to a sewage farm where it was passed through filter beds to an outlet channel on the North Arm. Sydney was discharging into the ocean at Ben Buckler headland in 1886 and had Mosman and North Sydney connected with treatment works at Willoughby Bay by 1892. Melbourne started a water-borne system in 1891, but nothing significant happened there till 1897, when the Melbourne and Metropolitan Board of Works took charge and formed a sewage disposal farm at Werribee. This later produced the most publicized beef in Australia. The first section of the scheme was completed in 1920. The jurisdiction of the M.M.B.W. was then extended to a thirteen miles radius from the G.P.O. and a programme to connect every house in the suburbs was begun. Between 1903 and 1912, Hobart laid pipes to most of its houses. It deposited the sewage in deep water of the Derwent River at Macquarie Point. Perth began a general septic tank disposal system in 1906.

The spreading network of pipes and the development of plumbing brought changes to the plan of the house. Water seals on every fitting and a ventilator between the seal and the sewer isolated each house from the gases in the main. The water-closet pan could now be brought inside the house without unpleasant consequences. By 1890 it was frequently found in the bathroom, unscreened. Later it was put in a separate compartment beside the bathroom. In working-class houses the pan remained in the separate outhouse in the back-yard, oblivious to technical development, until the late 1930's. Even in 1950 lower-income groups often would not accept a w.c. entered from the house. The compartment could be built under the main roof, but the door had to face outside. In middle-income groups a compartment with two doors was favoured; one door led from the bathroom, the other from outdoors, from the laundry or back porch. Upper incomes ran to two or more closets, of which one at least was in or off the bathroom, one for servants at the rear.

The Board of Works or its equivalent in every city controlled autocratically the design of plumbing within each house connected to the service. Ventilators on fittings were required to be raised well clear of the highest human nose. This was of no concern to the earlier builders, who could hide the towering stacks within the folds of their steep roofs. But after 1935, builders were more troubled by the tall thin pipes which dominated their low roofs. To an extent these masts limited the development of free planning, for few were brave enough to place a bathroom on the street side of a low-roofed building.

Plumbing amounted to about three per cent of the cost of the house. Efforts to reduce the cost by grouping the rooms which contained plumbing — kitchen, laundry, bath and w.c. — affected planning in periods when building costs grew out of hand, such as the years following the world wars.

The organization of domestic plumbing into a compact "mechanical core" or service unit was first undertaken by Roy Grounds when he built "Clendon" bachelor flats in Melbourne, 1940. By placing kitchen and bathroom back to back, he was able to conceal all plumbing in a small internal duct. The hot-water cylinder, supported centrally above the stove, was within inches of every outlet tap.

A third underground pipe carried gas. It was older than the others. It had run to the first street lights of Sydney in 1826. It had been extended gradually until 1837 when the Australian Gas Light Company was incorporated. It started domestic duty in 1841. "Fernhill," at Mulgoa, New South Wales, was equipped throughout with gas pipes built into the original 1842 structure and fitted with crystal brackets and a chandelier.

Other capital cities followed in the fifties. A Melbourne blacksmith, George South, marketed in 1846 alarming metal containers filled with gas for domestic use, but the public was inclined to back away from him. The first gasworks, on a marshy flat between Collins Street and Little Flinders Street, were not opened until 1851. The coal was imported from Scotland.

Until 1870 the gas-pipe seldom brought to the home anything more revolutionary than a naked flame, more convenient than an oil lamp. Then the Bunsen burner transformed the heating properties of gas and began to change the character of the kitchen. Birmingham and American gas stoves were occasionally imported in the seventies. In the early eighties Australian gas companies opened their own stove sales departments. In Melbourne in 1880 the young Metropolitan Gas Company offered for hire locally-built "Walker" stoves in three models. They had sheet-iron walls painted black inside and out. There were no bottoms; the walls sat on cast-iron bases with four small feet. A floor drip-dish collected any food or fat which fell through the oven grids. The hotplate was cast-iron, pierced by three 4-inch holes. The oven burner was a half-inch pipe at the bottom, drilled with small holes. Each boiler on top had a cap to spread the flame from a single jet.

Gas fires for living-rooms and bedrooms arrived on the heels of the kitchen stove. Early models were made to fit the existing coal grates. A rod burner was fitted to the bottom of the grate and the basket was filled with egg-shaped balls which glowed red in the Bunsen flames. An average installation cost £1 5s. Later, gas radiators were made in cast-iron boxes, fire-brick poised over burners transmitting the heat. Coloured glass and tile surrounds were added in the nineties. Perforated gas pokers and imitation logs were variations before 1908, when the skeleton fire-brick radiant became a standard element of gas-fires.

Meanwhile, the incandescent mantle had transformed lighting. A growing network of pipes above the ceiling pushed a long finger through the plaster in the centre of each room. A floral aureole spread on the ceiling around the point of penetration. The finger crooked its end to support a small cluster of glass globes. Beneath it all, thin chains dangled at head-height for adjusting the gas flow and thus the strength of the light. Swan-neck brackets sprouted on each side of more expensive fire-places. A few large houses adopted the costly device of remote-control switches located on the door-jamb.

In the nineties, hot water began to flow in the ordinary home. Gas bath-heaters were first offered to an unresponsive public in 1887. Gas-heated water cylinders transmitting hot water to taps in all service rooms did not develop until the 1920's. By the time of World War II heating appliances were examined and badged by the National Gas Association of Australia, which assured uniformity of structural and technical standards throughout the Commonwealth.

Just before World War I, the gas pipe had passed on to the laundry. Gas coppers, first imported by the Melbourne company, soon became standard equipment throughout Australian cities. Gas refrigerators (which had first appeared in 1928), gas drying cabinets and some other domestic gas appliances were in general use in the 1940's. In 1950 gas sales were still growing despite the uncomfortable feeling held by most manufacturers, as well as consumers, that the later rival, electricity, had all but won the fight.

The telephone arrived about a year after its first demonstration in Philadelphia had notified the world of an amusing new toy. Long before it became a public service, instruments were available in Australia for private use. In 1877, a pair of Edison-Bell phones and a quarter-mile of copper wire could be bought in Sydney for £5. Progressives were advocating its general use for communication within a building or between friendly neighbours, but one practical impediment had to be overcome: the electric bell had yet to be provided and messages could only be sent at fixed times.

In 1878 a strained conversation was accomplished between Melbourne and Ballarat. Two years later Victoria had the first public service. A private company formed an exchange in the top of the Exchange Building, Collins Street. Rental only was charged — £12 yearly within one mile of the G.P.O. and £5 more for each additional quarter of a mile beyond that circle. Next year, in 1881, lines in Sydney linked the Royal Exchange, the Post Office and the railway goods shed. Some months later, in a storm, the wires tangled with others feeding the city's first demonstration of electric lighting and the telephone exchange was burnt out. Soon after the Post Office took over the telephone. In 1907, Melbourne's system realized £40,000 when the Commonwealth government bought it to incorporate it in an Australia-wide system under the Postmaster-General.

Meanwhile the public had been discovering that it was rather more than a toy. The 32,767 subscribers of federation-year had more than doubled their number by 1908, trebled it by 1911, and stood 200,000 strong when World War I ended.

Subsequent technical improvements took longer to travel to Australia. Automatic exchanges did not arrive till Geelong, Victoria, led the way in 1912, nearly twenty years after their invention in the U.S.A. Then Brighton (Victoria), Perth (Western Australia), Balmain and Newtown (New South Wales) followed in rapid turn. Long-distance calls were not possible till 1925, when Sydney and Melbourne were connected. Multiple hook-ups, coloured instruments and other refinements, had made no more than passing appearances by 1950. Then post-war shortages restricted even the extension of lines to a public which had accepted the telephone as the fifth essential service after water, electricity, sewerage and gas.

Despite the accident with the power lines, the electric lamp's first demonstration in Sydney in 1881 convinced several enthusiasts that a new world of light was on the horizon. Hot, clumsy arc-lights had been seen before in theatres and exhibitions, but here was a convenient, spiked globe with a soft cool glow of domestic intensity. The enthusiasts set to work to form companies.

The first demonstration in Melbourne, made with many 20 candle-power lamps at the Athenaeum Hall in 1882, duly impressed another group of entrepreneurs. But by the next year three Melbourne companies were struggling to keep afloat. Electric light, at more than double the cost of gas, did not appeal to the public.

The effective beginning of electric light in the home followed the opening in 1890 of a 12,000 h.p. power-house in Green Street, Richmond, Victoria. Overhead wires hung from thick axed poles along the pavement for the first time as power was fed to the city and to the suburbs of Richmond, East Melbourne and parts of Prahran and South Melbourne.

Electricity had not consolidated its position by the end of the century. There were not more than a hundred homes in either Sydney or Melbourne connected by 1899, only a handful in the other capitals, and none in many large provincial cities. The Melbourne Electric Company did not pay a dividend until 1911, which was the year the tide turned and replacement of gas by electricity became more frequent. One night gas was in use as before, next morning the electricians were in, screwing conduits round the cornices and architraves and threading their cables down the pipes of the gas pendants.

Just before World War I some people were even talking about an all-electric house. Electric stoves had been coming from the U.S.A. since 1907. The remarkable American electric refrigerator was on sale in 1912, with its wooden cabinet and prominent machinery. In this year the gas companies were advertising with a rather plaintive note that "tests of time and experience have proved that gas gives a steadier, better diffused and more brilliant light

. . . and is less trying to the eyes". But the public had at last decided which light it preferred. Nothing could stop the wires. They spread over every city and town, loaded with the power of hydro-electric or coal-burning generating plants. Gas lamps went into few new homes after 1915 and had been replaced in most old houses and nearly all streets by 1930. From this time on electricity also began to gain ascendancy as a heating and cooking agent, although its sloth in hot-plates was always a source of complaint.

As the web of pipes underground and the network of wires overhead grew thicker, the house plan underwent a subtle process of change. In the early years of the nineteenth century, the plan was a feudal system of rooms. It all began with the drawing-room, pride of the home in the prize place at the front. No expense or attention was spared on its plaster walls, moulded cornice, panelled doors and marble fire-places, its carved architraves and deep skirting grained to imitate the most costly of woods.

In second rank came the family parlour and the main bedrooms. Their plaster moulds were lighter, the fire-places plainer. Back bedrooms and halls, filling non-commissioned ranks, had no cornices, only low skirting boards, thinner doors and smaller, plainer fire-places and windows. But beyond all this, so lowly that they did not merit plaster on their brick walls and could not be entertained under the main roof, were the kitchen and the bathroom.

The story of the development of domestic planning is primarily an account of the democratization, as the 1940's would have called it, of this arrangement. Gradually the front parlour began to share some of its good things with rooms of the second rank. At the same time the service rooms began moving in. The bathroom drew towards the bedrooms, the kitchen towards the living-room. Plaster and paint were fairly distributed over all rooms. After World War I, which made the world safe for the kitchen, the living-room lost its more elaborate trimmings and the service rooms became the most expensive in the house. All rooms at last were literally on the same footing.

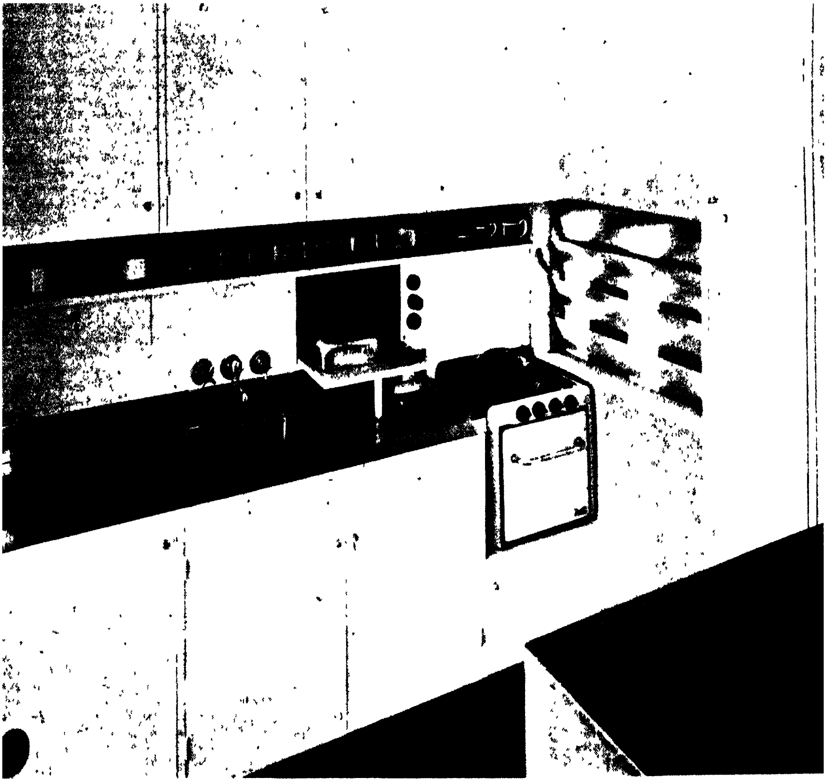
From this time on it was popular to imagine transport carrying Australia ever closer to the centres of culture and industry, to which she was once "down under". By World War II Australians could, and frequently did, fly to London in a few days, They could call Paris on their own home telephone, and converse for about £1 per minute. They became recognized as a nation of world-travellers. But, notwithstanding all the advances in communication, applied scientific aids to living always remained behind those of America. In fact, the time-lag grew more apparent in later years as communications accelerated. Australian homes had been quicker to adopt the latest overseas devices a century earlier when the ideas had to travel for months by sailing boat. In those days when every product was imported, Australian housekeepers used the latest American fire-stove while it was still a novelty in the States. But after Australian manufacturers took over the bulk of the work of supplying household aids, the housekeeper sometimes had to wait many years before new labour-saving devices were offered her.

Most of the helpful kitchen apparatus which was illustrated in the coloured advertisements of American magazines was, at any time in the twentieth century, about ten years in advance of Australia. Dish-washers, garbage-disposers and double-oven stoves were virtually unknown in Australia before 1950, except for isolated examples imported from America. The tumbler-type automatic clothes-washer and the pressure cooker made their first Australian appearances as late as 1948. Such an obvious labour-saver as a self-lighting device was virtually unknown on Australian gas stoves, and many gas and electric models demanded the more thorough supervision of the cook for want of a simple thermostat or automatic switch.

Outside the kitchen, mechanical devices were no more advanced. Even in the coldest parts, central heating was hardly ever used. Even in the hottest parts, air-conditioning in houses was unknown. Progress in radio and phonographic reproduction reached Australia only after several years of trial overseas. The Australian attitude to advances in applied science was caricatured by what happened to television. Thanks to other methods of communication, the Australian was able to keep abreast of television development overseas, but it was not available for his own home. Week by week, he read in his daily paper of the gradual advance of the technique in England and America. The cathode-ray tube, the scanning speeds, even the type of cabinet used for the home were familiar to him by newspaper explanations and diagrams. He read of the new development, the programmes, the rivalry with the cinema. He laughed at jokes about television in cartoons and comic-strips in his own newspapers. Television was an acknowledged, familiar custom in his modern Western world. He knew all about its existence for a decade before he experienced it.

With the exception of television, the Australian house after World War II was generally as advanced in mechanical equipment as the equivalent English house. It was considered to be nearly as well fitted as the Scandinavian house at comparable income levels, and better fitted than most other European houses. But Australians knew nothing of European cooking and washing methods. The success of the Australian kitchen could be judged fairly only by the degree to which it approached the known model—the well-publicized American kitchen. Although the most expensive architected kitchens of these two countries were not radically different, at every lower level the Australian fell far behind the American standard. The poorest kitchen in the typical big post-World War II American housing estate had a better stove and more and better cupboards than the kitchen of the average house custom-built for the lower-income Australian, and was in every respect superior to any Australian government housing authority's kitchen.

The average Australian wanted to be as well off as the American in the possession of television sets, refrigerators, better stoves and cars, but he understood that the industries of his country were not yet geared to mass-produce these things at a cost within his reach. On the other hand, the Australian house often demonstrated a resistance to practical suggestions for material improvement which was not related to the industrial situation or to big equipment. Two generations of architects were ignored when they advised smaller kitchens planned to save steps in the routine of cooking. More attention to detail in cupboards and in the available manufactured goods would have carried the average Australian kitchen a long way towards the American model. The causes for this resistance were deeply set in Australian society and involved the manufacturer, governmental bodies and the housewife herself. The local manufacturers, lacking much competition, were not generally alert to new developments. The various government service authorities, always wary of any innovation which might possibly jeopardize public safety or put extra strain on the service mains, were inclined to delay approval of new ideas pending long and severe tests. Finally, the Australian housewife herself, not conditioned to thinking in terms of the latest model and feeling remote from the spectacular labour-saving developments in the U.S.A., tended to view with some scepticism each new piece of equipment which did manage to make its way to the Australian market.



ROY GROUNDS: Kitchenette, as developed in several houses from 1932 to 1940, when it appeared in this form in "Clendon" bachelor flats, Armadale, Melbourne. It backs on the bathroom and a duct between them carries all the pipes. Fittings include bread boxes whose doors drop to form chopping-blocks, a long recess for glass food jars, a light concealed in the high crockery cupboards to flood the work space, adjustable louvre windows behind a brick grille for natural light, and ventilation beside the miniature range, ventilated cupboards below the sink, a refrigerator, and a liquor cabinet under the buffet counter (*in foreground*). The whole is divided from the living-room only by the buffet. Most of these ideas influenced a generation of young kitchen designers.

ROBIN BOYD: Living-room of house at Balwyn, Melbourne (1950). The aim here was to make a continuous pattern of the living-spaces while maintaining to some extent conventional segregation of activities in a small house on a normal suburban lot. The dining-space in the centre is divided from the kitchen by the buffet in the foreground, from the entrance section on the right by the vertical screen, from a covered terrace on the left by glass to the floor, and from the living-room (whose floor is dropped three feet) by a balustrade.

18

Politics

At no time was there any direct political influence on the private house. The sanctity of the Australian home as the Australian's castle was the original unquestioned plank in the platforms of all political parties. The only time that the major political conflict appeared to threaten the private house was in 1948. The bank nationalization proposal then brought the simmering socialization question to the boil. The private banks used, among other weapons, a series of press advertisements relating incidents in the life of a fictitious young man named Bob Freeland. Bob was fresh-faced, clean-cut, with fair curly hair on his head and forearms. He was slightly thicker-set than the lean, tanned Digger who represented the typical Australian in cartoons of the previous generation. Bob and his wife and nicely balanced family of two lived in an ambiguous house. Its general air, which could be sensed from a glimpse of a high creeper-shrouded roof, was no less characteristic of the typical Australian house than Bob himself was of the typical Australian man. For since both man and house had been designed by agile publicity agents, it could be assumed that they indicated what the average Australian would at least like himself and his house to look like. The point of the series was that Bob and his family did pretty well as things were. They were alert to foreign-inspired disruption of "the Australian Way". Their home, for instance, was their own. They had worked for it, saved for it; no one was going to take it from them.

In other less surreptitious ways, propaganda of the time was implying that the Socialists were ultimately out to take over the private house. The apparent reluctance of Labour governments to allow purchase by the occupiers of state-built homes strengthened this point. From its early years the

Australian Labor Party's membership consisted almost entirely of tenants. Perhaps for this reason it was slower than the various other parties to exploit the idea of happy home ownership and less sympathetic to anyone who seemed to be exploiting rent-payers for profit.

Just before World War I a Labour government came to power in New South Wales with a vigorous socialist housing policy. It blamed the housing troubles of the day on two groups in the community – the landlords and the contractors – and set out to eliminate the need for both. One of the first and most important moves was to arrange the entry of the state Works Department into a number of business enterprises, in direct competition with private companies. It also planned that private builders should no longer be invited to tender for any government works; the department would organize construction with day-labour and save, for a start, contractors' profits. The model suburb of Daceyville was planned, and work began. As in most projects not firmly bound to a pre-determined level of expenditure, the cottages grew in cost faster than they grew in size. Eventually the chagrined government found it could not cut costs by this method, and it perforce reverted to the contract system. The first private tenders submitted showed a reduction of some £100 on the £600 cottages. The failure of this project made Left-wing politicians realize that the tangled, disorganized building industry would socialize in its existing form about as happily as housework. Nevertheless, the unions were still hopefully advocating it in 1950. But even the extreme Left had never questioned the right of private home-ownership. No party which dared to question it could have survived one meeting in a nation of villa-builders. J. J. Dedman, a former Federal Labour minister, unsuccessfully claiming £10,000 damages from the *Geelong Advertiser* in 1951, went so far as to say that ideally in some distant socialist future the state would own all homes. But generally, every political party was anxious to assist every man to tie the colossal millstone of home-ownership about his neck.

In the middle of the twentieth century, the proportion of house-owners to tenants was about two to one, and increasing. Before World War II the proportion had remained stable with about 53·8 per cent of all dwellings (including tenements and flats) occupied by owners or part-owners in process of buying by instalments. Only 41·7 per cent were occupied by tenants.[1]

After World War II, inflationary building costs were offset to some extent by increased government-sponsored loans to owner-occupiers, although loans for "investment" building were limited. Thus the number of houses built for rental decreased in proportion and the great majority of detached houses was built either directly by intending occupiers or by speculative builders who sold to occupiers. These builders often reduced their capital expenditure by selling on a deposit some time before the building was complete. Similarly, the number of new investment flats decreased and the practice of co-operative and "own-your-own" flat building developed, intending occupiers buying shares in the building before it began.

In periods of economic buoyancy the existence of a housing problem came to public attention. In the parliaments, opposition parties criticized the government parties and housing ministers could reply only with unintelligible statistics. Conservative and Labour governments in turn gave the same answers and tried similar remedies. It was always a problem of labour and material shortages, incapable of solution by ordinary methods — a national circumstance above party politics, like the World Wars. After the second of these, some minor political anomalies occurred in state administration. Conservative governments in South Australia and Western Australia, for instance, exercised stricter controls on private building than did the Labour governments in Victoria and New South Wales.

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[1] In 1933, the year of the first census in which the nature of occupancy of detached dwellings was tabulated separately from tenements and flats, 56·3 per cent of detached houses were occupied by owners or by instalment buyers and 39·1 per cent by tenants (4·6 were occupied by caretakers and others). Owners were more numerous in rural areas: 63·2 per cent, against 54·4 per cent in urban provincial areas and 51·4 per cent in metropolitan areas.

During the war, the Commonwealth government, constitutionally unable to build houses except for its own employees or ex-servicemen, devised a method of building through the states. In December 1943, the Commonwealth and State Housing Agreement became effective. Under it, Commonwealth finance was made available to the states for building low-cost houses for sale or rental. A system of rental rebates ensured that no family was asked for more than "a reasonable proportion" of its total income in rent (one-fifth of income at the basic wage). The states built with whatever machinery they had – most of them with housing commissions or trusts formed just before the war, primarily for slum abolition.

The South Australian Housing Trust was typical. It was formed in 1937. For the first seven years it commissioned private architects for designs; in 1945 it set up its own architectural department. It always contracted with private builders to erect the houses. It sold single houses and rented pairs. Its work increased gradually until by 1949, with 6,000 houses already built, it was responsible for about one-third of the housing output of South Australia.

Queensland's Housing Commission, starting in 1945 in place of a workers' dwellings scheme of 1910, was similar in operation but accounted for only about ten per cent of home-building. In Tasmania the Agricultural Bank's housing division, founded in 1907, accounted for some twenty per cent of the state total of houses. New South Wales and Victoria had housing commissions on the same lines as South Australia's, except that they built three-storey blocks of flats as well as houses.

Whether the separate commissions' blue-prints came from their own architectural departments or from private architects enlisted by the governments, the designs were of a pattern. With space economy the first consideration, there was little scope for variation in room arrangement. In every state, commission houses fell into compact collections of rooms of minimum sizes ordained by the Commonwealth government, which had retained the prerogative of offering parental advice. An internal passage connected the rooms, but to conserve hall space the entrance door usually gave direct to the living-room — a feature which no speculative builder would have dared to offer the public.

Despite the influential position of the states as builders of nearly twenty per cent of the nation's houses, state design had no apparent effect on the rest of the community's houses. On the contrary, the states seemed most anxious that their houses should give the appearance of suburban familiarity. If the insides were pinched and hall-less, the outsides should be indistinguishable from those of any popular villas of private enterprise. Thus for the first time, the shape of a porch, the colour of a tapestry-brick fire-place and the girth of an ornamental plaster cornice became politically important.

In this bid for popularity, the different states involuntarily adopted local idioms. The little builders' habits of finishing an eave or gable or window, which varied from state to state, were picked up by the economical governmental standard plan. There were a few rather unhappy adventures in Functionalism in Victoria and Tasmania: the Victorian Housing Commission's first experimental concrete houses in 1939 had low-pitched roofs; a post-war Tasmanian weatherboard model had skillion roofs and a porthole with two horizontal glazing bars.

In the field of orthodox construction, the various state governments were equally ready in these difficult post-war times to embrace any expediency, within or without their political philosophies — anything to build more private houses. But whenever any vigorous large-scale attack on the shortage was suggested, the differences between Left and Right showed up.

It became apparent early in 1948 that the Liberal party, whose strength in state politics was growing, was not keen on the principle of prefabrication. The reasons for this were not hard to find. Unlike the U.S.A., Australia had very few private manufacturers substantial and enterprising enough to plan, or with factories already capable of, mass-production of houses. If the principle were accepted, inevitably the government would have had to take the lead. This would not have been acceptable to an anti-socialist party.

When the Liberal party won the Victorian election from Labour on a strong wave of anti-socialist feeling in October, 1947, it found the government "Beaufort" prefabricated house project[2] tooled up and ready to start. A few prototype houses represented a £6,000,000 contract and several years of joint efforts of the previous Labour governments in both Melbourne and Canberra.

In Victoria at the same time there was another house project, the one private prefabrication scheme of considerable proportions. This had been produced by a private company called the Commonwealth Aircraft Corporation. The house was called "The Myer House", after the big department store which had been announcing its intention of marketing a people's house ever since the end of the war. The Myer house and the Beaufort house, facing the new state government at the start of 1948, represented the housing solutions offered by private enterprise and socialization respectively. Pledged to oppose socialism, the government stopped the Beaufort. At this discrimination there was a public outcry of sorts, apparently sufficient to concern the government. Not in a mood to argue, it cancelled the Myer house as well. Thus large-scale complete prefabrication in Australia was nipped in the bud. It had not been a method of construction so much as a political issue.

The home-building operation involved men in five general classes: owners, employer-architects, employee-draftsmen, employer-builders and employee-workmen. Each class organized itself for better protection against one or more of the other classes.

The shape, decoration, finish and above all the size of the Australian house were being modified continually by the inexorable if uneven rise in the cost of building. While increases in the costs of raw and manufactured products accounted for some part of each rise, nearly two-thirds of the average addition was due to the progressive decrease in the length of the working day of tradesmen on the site and the fluctuating increase in their wages.

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[2] See p. 143 above.

The legend of Australia as the "workingman's paradise", built up in the second half of the nineteenth century, was largely formed by the men who made the buildings. Such an advanced social change as the eight-hour day was won by the trade unions of the building industry before the workers in many other trades had even united.

The building workers, regarded by milder men as leaders of trade union movements since the sixteenth century, were the first to organize actively in Australia. Their first permanent union was formed in Sydney in 1845, the Friendly Society of Carpenters and Joiners. The first in Victoria was the Society of Operative Stonemasons, founded, the story went, on the November night in 1850 when Port Phillip was wildly celebrating its freedom from New South Wales.

The first important fights between labour and employer were on the question of time. In New South Wales in 1855, when a 10-hour day and 56-hour week prevailed, some masons held a meeting in Sydney. They resolved that eight hours should be the maximum for a day's work under the Australian sun. Anticipating that their employers would resist the move, they made known that they were prepared to agree to a proportional wage reduction from the current 15s. to 12s.6d. daily. To everyone's surprise the contractors of Sydney at once assented. On 5 February of the same year the masons of Victoria, scattered over the gold-fields during recent years, re-established an active society in Melbourne and immediately made known their intention to secure the 8-hour day. Other building trades supported the proposal. The press and the public expected trouble, but none came. Instead of making a formal demand, the masons put their case to their employers informally at a meeting on 26 March 1856, in the old Queen's Theatre. The masons' case was that the current 10-hour day, while taxing to them, was of doubtful economic value. Long English hours, they explained, were inefficient in the extreme heat of the Australian summer. To the surprise and relief of the press, the Victorian employers also subscribed to the general opinion and agreed to an 8-hour day for masons.

Other building unions quickly followed up the advantage. In turn, the plasterers, bricklayers, carpenters, joiners, slaters, painters and plumbers won recognition of the principle. By 1856 the 8-hour day was recognized throughout the building industry in Victoria.[3]

Stimulated by these successes, and with little more trouble, the building trades in South Australia, Tasmania, Queensland and Western Australia achieved the same result. The 8-hour day then spread overseas, but it was not till nearly a decade later that it was accepted in England and U.S.A., and some non-essential tradesmen outside the building industry were still fighting for it in Australia at the end of the century.

There was no further move to shorten working hours until after the 1929-32 depression. Then the campaign for the 40-hour week began. It was maintained till 1941, dropped during the latter part of the war, picked up again eagerly in 1945, and finally won on an Arbitration Court ruling in 1947. On 1 January 1948, building workers, in common with most other Australians, began working a 40-hour week. Some nine months later the building trade unions made their first rather unhopeful references to a 30-hour week.

Meanwhile the wages paid each hour's work had been the subject of countless little battles between tradesmen and contractors. As early as 1829 painters and carpenters successfully struck against the practice of paying wages in foreign coins. In Port Phillip's growing-pains depression of 1843-4, carpenters and bricklayers organized themselves to demand an increase to 6s. daily.

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[3] On 21 April 1856, two big Melbourne contractors still remained unsympathetic. These two, Cornish and Holmes, who were building the Houses of Parliament and the Western Market, respectively, were then treated to special attention. A procession carrying the first "three eights" flag (eight hours labour, eight hours recreation, eight hours rest) as well as a Union Jack, marched through the city. Picking the tradesmen off each building operation it passed, the procession arrived at the jobs of the dissenting employers and called off every workman. Impressed, the contractors bowed to each flag.

Throughout Australia's history construction was constantly being interrupted and delayed by employer-labourer discord. Little battles on building jobs were always occurring, and in the heavier construction industries which fed the building trade a complicated war was always threatening.

The newspapers believed they had the answer from the start. In the 1859 strike, the *Mount Alexander Mail* explained that "the absurd demands do not emanate from the minds of the tradesmen generally, but from persons who have constituted themselves their leaders and who prefer spouting for pay to doing an honest day's work . . . When will the workmen learn sense, and choose other and better leaders?" Other papers were asking the same question next century, and still found no satisfaction in the answers they received.

The majority of the men who built the small private houses felt themselves fairly remote from these fights. A large proportion of the skilled labour that went into the cottages was employed on a sub-contracting basis. The contractors were not heavily financial. Frequently they had only just stepped out of tradesmen's jobs in which they had picked up sufficient general knowledge to feel confident of setting up privately. Most of the sub-contractors whom they now supervised were their mates on a previous job, skilled tradesmen who had set up smaller businesses in their own lines—plastering, bricklaying, plumbing or painting—taking from the central contractor the responsibility of organizing the labour and materials in these specialist trades. These sub-contractors did most of their own labouring. If they employed anyone to do the dirtier work, he usually turned out to be a son or a father-in-law. None of these people were much impressed by the results of battles between unions and big businesses involved in more important buildings. Nevertheless they raised their fees proportionately to each wage rise won by the militant employees of the outside world.

Always a sensitive barometer of the nation's economy, employees' salaries in every branch of the industry were constantly fluctuating in sympathy with each building boom and slump. In the 1854 peak, Victorian masons and bricklayers were asking up to £1 15s. daily, carpenters up to £1 7s. 6d. and plumbers £1. These were much more handsome figures than those paid to similarly skilled workers in other trades, but the building workers could afford to aim high. The land was flowing gold, buildings were urgently required, and there were few men willing and able to make them. There were a few short strikes, each won by the employees. Later the same year this unstable society collapsed. As the surface gold ran out, the diggers came drifting back to the towns looking for work. The higher-paid building workers suffered more heavily than any others. Thousands in Melbourne and Sydney were suddenly unemployed. Those who managed to stay working found their wages halved.

As their unions grew more powerful, the wage-level was laboriously built up again, only to collapse periodically at each succeeding economic slump. In South Australia and Queensland there were many periods between 1860 and 1880 when skilled tradesmen felt themselves lucky to be paid £2 weekly. In Sydney and Melbourne they would have been better off only by a few shillings. Then, in the land boom of the eighties, the situation changed once more. Construction strained ahead of an inadequate labour supply, unemployment vanished, and tradesmen fixed their own wages. But less than ten years later wages collapsed almost overnight to 4s. or 5s. a day. In Melbourne in 1895 it was not unusual to find one man at £3 weekly supervising the work of twenty or thirty boys, and Chinese labour was welcomed by contractors.

When the century turned the building industry had almost fully recovered. From then till the depression of 1929 labour costs gradually increased. A plumber earned 8s. 6d. to 10s. daily in 1905, 12s. in 1914, 22s. in 1929.

The depression threw into unemployment most of the 61,191 who had been members of building unions in 1929. They began to trickle back to work in 1932. By 1935 building was beginning to boom once more. Tradesmen's wages built up steadily. Before the more rapid spiral of 1950-51 began, bricklayers and carpenters had awards in all states of about £11 weekly, plus minor bonuses.

For the architects, professional organization began in July 1856, in Melbourne, when the Victorian Institute of Architects was formed. It had J. A. Knight as first president, and the "cultivation of friendly intercourse between the members of the profession, and protection and advancement of its interests and the elevation of architecture as an art" as its objects. It developed as steadily and unspectacularly as any other professional body, never having cause to demand much more than polite recognition from the government.[4]

Architects were slower to organize in New South Wales. Late in 1870 Thomas Rowe aroused sufficient enthusiasm to form a society among his fellow practitioners in Sydney. The rules, printed in 1871, included the object of "a diffusion of the knowledge of architecture, fine art and civil engineering". The inaugural gathering was a marked success, attended by the state governor, official Patron of the Institute, and many other art patrons. Every wall of the chamber was entirely covered with drawings lent by the members. These included many "interesting specimens of architectural design", as Rowe later reminisced, "no one being allowed to exhibit his own work". Two years later the Sydney City Council, drafting a new building act, recognized the Institute by requesting recommendations. A special committee of the Institute made extensive alterations and added some clauses on subjects which had been overlooked, including one demanding a window to every room. Other important building advances in later years resulted directly from Institute effort. The New South Wales government was persuaded to endow a Chair of Architecture at the University of Sydney, the first in Australia. The first serious move in town planning in Sydney was prompted by Institute activity.

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[4] In 1857 it unsuccessfully attempted to amalgamate with the engineers. In 1880 it held a popular exhibition. In 1881 it brought public building competitions under control. In 1889 the Royal Charter was granted by the Queen. In 1946 it absorbed a small rival body, the Victorian Society of Architects.

The story was much the same in other states. Finally, all Institutes were linked in a national body, the Royal Australian Institute of Architects.[5]

Shortly after they had amalgamated and settled down officially as professional men, architects in each state turned their minds to elevating the name of their profession. As early as 1890 the Victorian Institute managed to get a bill presented to Parliament aimed at limiting the use of the title "architect". In those times anyone could call himself an architect with impunity. Dozens of bricklayers, carpenters and builders who occasionally indulged in small designing exercises in the course of their work did so style themselves. The bill, aimed at these people, proposed that only registered men with approved qualifications should be allowed to use the word. The 1890 Victorian bill failed, and the architects of every state had to persevere another thirty years before they received governmental backing to such a policy. Then, in 1921, New South Wales and Western Australia both passed Registration Acts. The final wording of these acts bitterly disappointed the architects who had promoted them. The new laws covered the future – no more untrained men would be allowed to call themselves architects – but nothing would be done about those already practising. This politic move on the governments' part infuriated those architects who had had specific charlatans in mind when the bills were originally drafted. A Victorian registration act followed in 1922. Queensland's was in 1928, Tasmania's in 1929, South Australia's not till 1939.

All the acts were initially weak, but subsequent amendments added most of the safeguards sought by architects. By World War II no man who had not academic qualifications of world standard could call himself an architect anywhere in Australia. It was not so easy to stop unqualified men practising. There were always a few people slipping between some badly fitting sections of the acts, people who termed themselves on letterheads and generous posters outside construction work as "Architectural Designers", "Architectural Planners" and other such terms. Frequently they added a few capital letters after their name which meant quite as much, or as little, to the public as did the Institute membership letters (F.R.A.I.A. or A.R.A.I.A.[6]) displayed by the qualified men. Sometimes the unqualified men may have been more capable than a great number of qualified architects. Industrial designers, for example, were responsible for many good houses. And despite the registration acts, anyone who could produce a scale drawing, any draftsman down to the men of the cut-rate plan services, remained "architects" in the eyes of the general public.

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[5] In 1914, when all states had established institutes, a Federal Council was formed to standardize policy on fees, ethics and competitions. Sixteen years later, after many conferences, an Australian Institute of Architects was set up as a subsidiary body. Then New South Wales, followed by Queensland and Tasmania, allowed their state institutes to lapse and formed instead 'organised chapters' of the Australian Institute. Victoria and South Australia retained separate but affiliated bodies. Finally, Western Australia established a chapter of the Australian Institute in 1942.

The home-building public, as distinct from factory builders, and church and hospital committees, was never really convinced of the importance of an architect. At infrequent intervals the various institutes published pamphlets and held exhibitions explaining the work of an architect — preparing sketches, working drawings and specifications, calling tenders, signing contracts, supervising, selecting equipment, and so on — most of which tasks were not widely known to be part of his work. Much of the architects' propaganda was undoubtedly effective. Most cultivated men and women eventually agreed that an architect was important if one wanted a first-class house. But even they never considered him as a real essential, and were inclined to think of his services as a luxury which might be beyond their means. No one seemed impressed by the architect's occasional statement that he could save his own fee by economical design.

About 95 per cent of all building works larger than a house were performed by builders working obediently under the direction of architects. Such architects had usually been selected with great care by the proprietors, and enjoyed their confidence and respect. When these same proprietors began to consider building a new home they did not in every case feel it was still necessary to employ the same, or any other, architect. They considered the problems of an office or factory beyond the layman's comprehension; bye-laws, regulations and intricate plumbing were involved. But the house was a comfortable, human, comprehensible problem like a jig-saw puzzle. Everybody liked toying with the design of his next house. Every summer, lovers drew plans with a stick in the sands of every beach. In the 1850's Mrs. Charles Meredith described in *My Home in Tasmania* the typical, timeless preliminary doodling: "I made innumerable plans, each seeming to me in its turn perfectly unexceptionable, until my husband, with his awful precision of compasses and calculation of 'ways and means' ranged in array against me, proved one after another their impracticability. At last a partnership plan was concocted to our mutual satisfaction, combining comfort and economy with a sufficient regard for appearance . . ." A century later, the *Australian Woman's Weekly* ran a £4,000 home-design competition on the lines of a recipe contest.

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[6] Fellow or Associate of the Royal Australian Institute of Architects.

During both World War I and World War II such concoction of future home plans was a hobby of lonely members of the A.I.F. in distant outposts. It was a patience game second only to crossword puzzles. As in the case of the Merediths, the men usually looked after the practical side of planning and left their wives to fill in the kitchen fittings and to have "sufficient regard for appearance". In event of disagreement on the plan the man almost invariably gave way to the woman with a shrug, "it's her house", and the inescapable implication that his heart really lay with the boys in the bar.

Even the small percentage of home-builders which went to an architect did not always demand an original design of him. Many would show him all the rooms and details they wanted and merely ask him to organize the parts into a whole. Before 1900 most of these clients would indicate an existing house in some other, usually more expensive, street nearby. After 1900 when illustrated magazines began to grow familiar they more often brought to the architect's office cuttings from several different journals pinned together with a list of notes. Many architects did no more than what was requested of them; they organized the plagiarized parts into a house. Such practices were not officially discouraged by the professional bodies. The public was not taught by them about integrity of design, but the growth of the institutes of architects did have some other important effects.

They raised the standing of the profession and made public selection of suitable architects more likely by outlawing advertising. In 1871 the N.S.W. Institute made an early move to forbid unprofessional solicitation, its Vice-President hastily removing a boldly lettered placard from one of his building works. Soon self-respecting architects avoided making such public statements as "Mr. . . . is happy to give his best attention to any business with which he may be favoured", or "Mr. . . . will be happy to trace plans, copy specifications and take out quantities for contractors and builders, and will guarantee the correctness of same." Such advertisements, hardly compatible with the idea of selfless devotion to the cause of design, had been commonplace before 1870.

The institutes also managed to curb the practice of architectural competitions[7] and to enforce minimum professional fees. Leading architects had commanded fairly high fees from the earliest days. Francis Greenway asked five per cent of the cost of building in his first advertisement of his opening a practice in December 1814. So did Charles Laing in Melbourne in 1840. This remained the rule till the end of the century, but it was not enough for many architects. They adopted the practice of accepting another one per cent from the builder as a payment for the plans, a practice so fraught with possibilities of corrupt dealing and with danger to the profession that the Institutes then raised the minimum fee to six per cent. Even so, few men managed to make anything like a fortune out of architecture. Those practitioners in the most comfortable circumstances usually had some other source of income or managed their practice more as a business than a profession, as, for example, William Wardell[8]. In 1860 Wardell was Chief Architect for Victoria. Despite fierce public criticism by his contemporaries for accepting private commissions while in public office, he continued to take all the Roman Catholic Church work offering, even going to Sydney on special leave of absence to arrange work in New South Wales. This was upsetting enough to his professional rivals, but when he began to accept Protestant work as well they became more indignant. Finally, when he found his hands too full and began distributing the work to architect friends with whom he shared the fees, the position was intolerable. Several prominent architects, their pockets and ethical senses equally injured, attacked him in the press, anonymously.

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[7] Until the eighties, any institution requiring a building and unwilling to pay architects' fees, merely had to call a competition, set its own conditions and select its own judges. Even with prizes as low as £25 for a potential £20,000 structure they found struggling young architects willing to enter. Furthermore, they did not merely demand sketch designs; frequently they asked for full working-drawings, specifications, and even certified quantities. There was no guarantee that they would require the services of the successful competitor for supervision of the building. Thus many institutions were able to cut their architect's bill to roughly one-twentieth of the accepted amount. In the early eighties, the Institutes began to bring public competitions under their control and this exploitation ended.

The principle of setting a minimum figure on architectural services became important in depressions, when struggling practitioners were frequently tempted to lower their fees and the dignity of their calling to get work. In times of prosperity the reverse position obtained and Institute secretaries had their time cut out trying to track down over-charging charlatans rather than under-cutting stragglers.

When controlled or not, fees tended to keep rising. From 1936 many fashionable or conscientious architects charged

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[8] Architect for St. Patrick's Cathedral, Government House, the E.S. & A. Bank and other prominent Melbourne buildings.

7½ per cent and the most substantial sometimes rose to ten per cent. While still not enough to attract architects away from bigger buildings to the small-house field, these percentages appeared to the average owners as considerable straws which would certainly break the back of their building budgets.

Public-spirited architects often tried to devise some compromise system for the small house. Partial-service schemes of various sorts were suggested. In the long run all returned to the same elements: the virtual elimination of supervision and the adoption of standard plans and standard details wherever possible. By such methods architects felt they were able to reduce their fees by about half; but still the public was not notably impressed.

Every architect realized that the absence of his profession from the cottage field ultimately had an adverse effect on all architecture. The idea of an official advisory bureau for the lower-income group kept cropping up. As early as 1855, a year before the first institute of architects was formed, a semi-official attempt was made by one or two art patrons on the board of directors of the Freehold Land Society in Melbourne. Appalled by the grotesque houses rising in Melbourne and Geelong, they persuaded their co-directors to start an experimental venture. They planned to present their clients with a choice of better designs, prepared by architects, and to sell full architectural drawings and specifications for the chosen plan. A competition was called, offering prizes from £75 down for six- and four-roomed plans. A sub-committee of six "practical builders" was appointed to examine and report on the entries.

These revealed some first-class logical planning for Australian conditions. One of the city's leading architects, T. J. Crouch, won the four-bedroom cottage section with a plan which builders were still using nearly a hundred years later. Big engravings of the working drawings of selected plans were made, and the specifications were printed. Certified bills of quantities for each house were prepared, and full sets of all these documents were offered for sale with the society's blessing, "hoping that the colony generally will be benefited by the stimulus . . . to better design, especially in the suburbs".

The scheme failed for a thoroughly practical reason. Making copies of working drawings before the invention of blue-printing entailed slow and costly reproduction by engraving or lithography, which automatically restricted the number of designs that could be offered. This society began with six, and few intending home-builders could find their exact requirements in such a small field. For the same reason another similar project launched the following year by the *Australian Builder and Railway Chronicle* failed to find sufficient public support. This great disability was removed with the introduction during the nineties of commercial photographic printing processes for plan reproduction. Standard plan and specification shops now opened unattractive doors from time to time, peddling not design but merely cut-rate drafting. The various state institutes of architects discussed endlessly the possibility of opening their own bureaux. In 1927 New South Wales had a project in working order. "The Small House Plan Service Bureau of the Institute of Architects of New South Wales" was registered as a limited company. The original membership was made up of five architects, a builder and an accountant. The object was "to improve the standard of design and economic planning and construction of the small house". But next year the depression began.

Heedless of the trail of unsuccessful bureaux, the Victorian Institute decided on one more attempt to save the public from itself. In July 1947 the R.V.I.A., under the presidency of Robert S. Demaine, launched a new standard-plan service into the middle of the post-war housing shortage. The scheme was one important step ahead of all previous experiments: it had the co-operation of a daily newspaper, *The Age*. Every week, in a feature article, this service could remind the public of its existence and could advertise some new plan.

It was known as the "Small Homes Service of the Royal Victorian Institute of Architects in conjunction with *The Age*". About forty institute members submitted plans; about a thousand people each year bought them. After a time-lag of eighteen months some hundreds of houses built to the plans began to appear in the outer suburbs around Melbourne. They could be identified among the builders' designs by a general simplicity of form. This showed through some strong efforts by owners and builders to add features of interest to the plain walls shown on the working drawings.

Architects who submitted drawings were paid royalties on the sales. To avoid excessive repetition of popular designs, sales of any one were limited to fifty, with a maximum royalty of £75. Thus the architect could receive quite as much as he would under ordinary circumstances while fifty people shared in paying him. A few architects visited the bureau at intervals and answered home-builders' questions.

All standard-plan services were opposed in their time by a section of the architectural profession. It was held by some that the very principle was basically wrong. In the first place, every site and every family needed individual attention; in the second, the sale of plans gave the public a wrong and dangerous impression of an architect's work. An institute of architects selling blue-prints was no more reasonable than a medical association offering forceps for sale for home surgery. Architects who looked askance at these services shuddered at the thought of mass-produced paper work and unsupervised building. They knew that sensitive designs would be destroyed during building, lacking the architect's presence to defend them. On the other hand, supporters of the principle could point to the gradual good influence on suburban development, if only in the encouragement of simpler and more efficient plan shapes. Furthermore, among the ordinary efficient standard plans there was a sprinkling of more advanced, imaginative designs. These offered sensitive people without much money their only opportunity of acquiring architecture.

While most plan buyers were simply on the look-out for a plan with a shorter passage or for a cheaper blue-print, there were many genuine seekers for better design in the income groups which could not afford to commission an architect. These were the people who could not afford original paintings but were able to buy reproductions, who could not afford front seats at a concert but queued up for the gallery, who were able to enjoy personal appreciation of literature, drama, film and every other art but architecture, within their modest means. Supporters of the stock-plan bureaux asked the critics to explain how architecture could ever progress if it was to remain available only to the well-to-do.

Builders' associations began in the early seventies in New South Wales and Victoria. John Young was Sydney's first president (1873-1877) and Samuel Amess[9] was Melbourne's.

The associations were formed by the giants of the trade. By the twentieth century they could claim that every public and commercial building of consequence in their respective states had been made by a member. In 1933 the Melbourne group absorbed a smaller body which had been operating first as the Suburban Master Builders' Association and then as the Victorian Master Builders' Association. This was composed of the small house-builders. When these in turn climbed up to the bigger buildings and money, the little suburban operators, still feeling they were not represented, formed the Builders and Allied Trades Association.

A similar course was followed by builders in other states. The Queensland Master Builders' Association was formed in 1882, South Australia's in 1884. The Western Australian Builders, Contractors and Employers' Association was founded 1898, changing its name to the M.B.A. of Western Australia in 1939. The state organizations were linked by the

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[9] Amess became well known a few years later as the successful tenderer for the huge western façade of Victoria's Parliament House. After a dispute over the facing stone he lost the contract and the subequent argument, involving the inspection of samples from all over Victoria, was popularly called 'The Battle of the Stones'. John Pigdon won the battle and got the contract.

Master Builders' Federation of Australia, the first annual conference of which was held in Sydney in November 1890.

One significant difference between the outlook of a "master builder" who made houses as well as big buildings and the suburban builder who made the majority of small houses, was that the former accepted the architect as a middle-man essential to the strengthening of his own prestige. M.B.A.'s wanted the co-operation of architects, and generally secured it, for the architects in turn had quite as much to gain from the friendship. Conditions of building contracts which were mutually acceptable were first devised in 1890 when Queensland's M.B.A. embodied a clause relating to arbitration in the event of conflict during building. This was later accepted by other states and standard conditions of contract were adopted throughout the Commonwealth.

By the end of World War II the only figure in the building operation who was not represented by a collective body was the central figure, the owner. Then he too began to move. In a mood to believe that all four other groups were against him, the owner looked about for methods by which he could free himself of their tyranny. He grasped the co-operative principle. State sponsored co-operative housing societies flourished in most states, providing low-interest finance for privately organized building contracts.

Since the 1880's, most homes in the suburbs had been in a continuous state of being acquired for their occupants by long-term purchase. Loans offered to private home-builders by banks, insurance companies and building societies grew gradually more generous after 1900. Each rise in the cost of building was belatedly counteracted by more liberal terms of the highly competitive financial institutions. The phenomenal building cost rise between 1939 and 1951 prompted many companies to raise the proportion of valuation offered on any project from 60 to some 80 per cent. Theoretically this halved the capital outlay of the owner, or allowed him to accept a builder's price which was double the 1939 figure for an equivalent house. In fact, however, the official valuations of projected houses usually allowed for a future collapse in building costs, and seldom approached the lowest of the tenders submitted by builders. Thus the owner had to make up from his own capital the difference between valuation and actual cost, in addition to paying the 20 per cent of valuation required by the financial institution.

The co-operative housing societies after World War II offered loans up to 90 per cent of valuation for terms up to thirty years. Similar conditions were provided by the Commonwealth Bank. Ex-servicemen could borrow up to 95 per cent for forty-five years from the Federal War Service Homes Division. From any of these institutions an intending home-builder after 1945 could borrow enough to build a minimum cottage in his own name, provided he could advance two or three hundred pounds and was prepared to repay capital and interest, at the rate of some twenty-five shillings weekly, until old age.

The greater problem for the intending home-builder at this time when wages were comparatively high was the shortage of labour and material. Co-operative ventures sometimes tried to counter this difficulty as well. The first Homebuilders' Club was formed in South Australia in 1945. Members moved about from site to site, helping each other as best they could. Everyone had to contribute as many hours of work as he was given. If he happened to be a skilled plumber he had to put in one hour's plumbing on other members' houses for every man-hour of concrete-mixing or carpentry done on his house. Among the group were one or two draftsmen; they drew plans energetically while others dug their foundations.

In April 1948, the suburb of Lalor was opened on an arid plain north of Melbourne. For fourteen months the Peter Lalor Home Building Co-operative Society had been building the first group of eighty houses in a scheme which envisaged a garden suburb — "An organic society in which the happiness of the people themselves is the best answer to the threats of the present social order." Some 1,200 ex-servicemen formed the strong-willed core of the Lalor scheme. Despite inevitable difficulties and a cheerless, barren site, they built up their own factories and material stocks and succeeded temporarily in reducing building costs by roughly 25 per cent. They employed an architect, Stanley L. Frew, who made a series of standard house designs for members' selection and planned a community with offices, theatres and shops, co-operatively owned and controlled.

But there seemed to be little future in such ventures. Material shortages finally defeated the Lalor scheme. The Australian home-owner remained essentially an unco-operative individualist.

19

Enjoyment

The Australian town-dweller spent a century in the acquisition of his toy: an emasculated garden, a five-roomed cottage of his very own, different from its neighbours by a minor contortion of window or porch — its difference significant to no one but himself.

He skimped and saved for it, and fought two World Wars with it figuring prominently in the back of his mind. Whenever an Australian boy spoke to an Australian girl of marriage, he meant, and she understood him to mean, a life in a five-roomed home. He had never questioned its desirability, nor asked himself why other nations were prepared to forgo the undeniable advantages of a private castle in a big city for various forms of community dwellings and satellite towns. Not until he had won this home, had lived in it for some fifty years, did he begin to doubt. Then, with the term "suburban neurosis" acknowledged, the number of divorces increasing, the size of families decreasing, he turned on the unhappy thing he had reared. Yet this clean and tidy house could hardly be blamed. It had not been built for happiness. Anything but humble, his home was made as a pillar of the strange society of suburbia, a monument to snobbery. This house was never loved by its designer. It was not expected to be loved by its occupants. In a land of the free, the houses of the free were narrow, straight-laced, smug. Even such an elementary pleasure as a chair in the afternoon sun with a french-window open to a lawn was banned; grass would be carried indoors and trodden into the carpet. The finest weather was locked outside a back door, beyond a foot-scraper, a shoe-box, perhaps a shower-room. Family life had become, for the female, an endless sequence of cooking and restorative work behind the activities of the male and the infant. For the male, it was a fruitless search for quietness and peace in a jungle of kitchen and cleaning equipment and dissatisfied children. For the children, it was a constant conflict against restrictions. All parties sought enjoyment in various forms away from home.

The most obvious escape for the adult was in alcohol. Although Australians drank and were noted for drinking as much as any other people in the world, they consumed all but a small proportion away from home and away from members of the opposite sex. The male killed two birds with one stone when he drank. He escaped from the dull prison of the home he had built and from the atmosphere of women, with whom he associated the restrictions of home life. He kept the public drinking facilities to himself.

The hotels had immense bars from which, during World War II, women were banned under National Security Regulations. At other times there was no legal restriction on women entering the bars. There were no signs erected to suggest that they were not welcome. In smarter hotels a few women did venture as far as the saloon bar, standing among the male crowd, self-consciously feminine, their male companions braving the curious glances of other men with a sense of magnificent sophistication. But the women were not welcome in the ordinary bar. They were given dim little rooms off back passages called "Ladies' Lounges". In poorer suburbs the busy bar-tending host was frequently too occupied to provide this additional service. Women in these parts who wanted to drink were obliged to rely on the bottle departments, which tended to concentrate on heavily fortified sweet brown wine. While her husband drank in the most public conditions imaginable, the housewife of the industrial suburb who was in any way addicted to alcohol was forced into the practice of private drinking, which developed an atmosphere of a secret vice.

The spirit of male camaraderie, born perhaps on the gold diggings and strengthened in the services of successive wars, lived on in twentieth-century suburbia in the crowded, clamouring bars. Here the conversation and the language often became as esoteric as the initiation ceremonies of the aborigines. The man who could be admired controlled a conversation consisting of schoolboy stories, exaggerated sexual references and a continuous stream of four letter words, but would knock to the ground with a single blow a man who used so much as the word "bloody" in the presence of a woman. This indicated his respect for the womenfolk. But a certain fear of appearing effeminate constricted the public-bar Australian in his associations with women. There came a time when a normal young man could not make a complimentary remark to a woman unless he was in the company of a score of his fellows, protected behind the back board of a truck and travelling past her at some thirty-five miles per hour.

This male comradeship, this fear of effeminacy, reflected on the appreciation of all arts. It resulted in what Sydney J. Baker (in *The Australian Language,* 1945) called Lowbrowism. "Lowbrowism is consonant with what the Australian called his 'love of sport'," wrote Baker; "his over-accented masculinity and his contempt for anything polished and refined; his practice of seeking loopholes to criticize or condemn; his acceptance of the theory that education is nothing more than a suitable occupation for children; his glorification of things which he imagines set him off to the world as a hard living sort of fellow." Four years later, Professor Joseph Burke (in a Syme Oration at Brisbane) described the same characteristics in other words as "the cult of mediocrity".

The herd instinct, the fear of his fellows' jeers, of being thought affected or at worst "pansy" did not encourage the working man to satisfy any curiosity he may have felt about the arts, did not permit him to think of his house as anything more than a practical problem. At various times through the twentieth century, Australian writers harangued the "average" Australian man for these characteristics, perhaps more fiercely because they seemed to believe that there was a chance of cure: for was not much of this attitude, after all, only a pose? Was not this front of aggressive mediocrity so superficial that it withered just a little under each of these furious blasts?

Apart from week-ends when sport, gardening or the beach took most Australians outdoors, evenings provided the only opportunity for enjoyment of the house. Until 1915 the public bars were open till midnight, and sometimes by special licence all night. Then New South Wales led Australia to an alcoholic policy which had an immediate and marked effect on the character of the evening. By referendum, New South Wales voted that all sale of liquor was to stop at 6 p.m. Soon Victoria, South Australia and Tasmania followed. It was intended as a war-time restriction, but the law was confirmed after the war and became a ruling feature of the Australian night. Only in Queensland, Western Australia, and Tasmania after 1937, were the bars open after supper. The convivial inn was unknown. The early-closing policy was derisively attacked by most Australian men and nearly all visitors and was grimly upheld at polls by a majority of housewives who now could be sure of their husbands' home-coming time.

The hotel bar hours were calculated to encourage home life and private entertainment. At higher income levels and in professional circles Australians probably did entertain more at home, both formally and informally, than their equivalents in other countries. And at lower income levels the liquor laws were indeed successful in driving the master home, even if partly drunk, in early evening. Further encouragement to home life came from the restaurants. Liquor licences were expensive and strictly limited. This did nothing to assist the development of small, cheap cafés, at which an ordinary family might have considered taking an occasional evening meal. Those restaurants which were successful tended to concentrate in central city areas, and to grow ever more expensive and more exclusive. By the middle of the twentieth century there was hardly so much as a snack bar open after 6 p.m. in any residential area. Nothing short of a major family celebration would take the middle-income family miles from its suburban home to dine out, and nothing could take a poor family. But, although most people were obliged in the evening to eat and to drink at home, there were various other threats to the family circle. Outside attractions to youth continually grew in number and intensity until the flames in the parlour fire seemed dim by comparison.

In the colonizers' eyes, theatres had come third after barracks and churches in the priority of public buildings. The first was built in Sydney for £100 in 1796. Melbourne's first, the Queen's, opened in 1845, a year before the hospital was put in hand. The number grew throughout the nineteenth century. Despite the cheapness of seats, a night at the theatre was a family treat, savoured for many evenings before with greater anticipation than the concerts or even the chaperoned dances. Other evening entertainment was held in the home, or in somebody else's home. Once a week or so guests would crowd into the warm front parlour. Young people played the piano, violin or 'cello, and the girl who could not play sang a little song. Afterwards they all joined in the games: Charades and Dumb Crambo, Animal-Vegetable-or-Mineral, guessing games, kissing games, Musical Chairs, and the pancake trick in a japanned tin performed by an amateur conjuror.

Night-life reached its climax in the eighties. In Melbourne in 1886 two huge new theatres, the Princess and the Alexandra, were opened. Nellie Stewart was to appear in "Faust". English and American theatrical companies drew full houses. Frederic H. Cowen conducted an orchestra and giant choir before a total of half a million people. Continental restaurants with society-wise head waiters, and bohemian Italian wine shops, opened in the theatrical east side of the city. Larrikin pushes prowled the streets. "Lairs" lounged in Bourke Street. They wore wide-brimmed, round-crowned hats, short coats with immense padded shoulders, tight short trousers, high-heeled boots and no shirts. Sometimes powdered glass was stuck to their hats and shoulders and sparkled under the bright new street lights. The lair was a freak symbol of the lure of city life. The drift to the metropolis had begun in earnest.

"Those were the days" wrote Alfred S. Kenyon[1] nostalgically during a twentieth-century depression. "All who lived in Melbourne in the times of the 1888-9 Exhibition . . . must look back with longing memory to those days — and nights — when Melbourne was thronged with artists and writers from all parts of the world. Cabs, at that time, ran to the suburbs throughout the night. It was generally the correct thing, after midnight, to go to the Heidepriem's Pork Shop for black lager and potato salad suppers." Nearly half a century later, when Kenyon was writing, Melbourne's suburban tram and train services stopped shortly after the theatres shut. All the city lay silent by midnight.

All over Australia in the eighties the week-end as well as the night began to offer counter-attractions to the home and garden. The growing desire for the outdoor life became so marked that churchmen such as the Rev. James Ballantyne felt moved to warn that young Australians, too much given to play, would turn to idling and thus to crime. Sport was becoming the new religion. The family pilgrimage to the local church on Sunday morning was thinning as the eldest son, then the next, then the daughter, won approval of other activities from meeker parents.

After World War I the tendency was for parents to spend more evenings at home and for youth to find still more activities to take them out. While the population grew from less than five to over eight million, the number of theatres and music halls dropped. But the number of picture theatres grew continuously for three decades, until by 1951, there was one theatre seat to every seven people, a world record shared with New Zealand[2]. Nearly every town, village and shopping block has its own picture theatre, periodically remodelled in tune with the latest fashion. Most homes in the big cities' suburbs were in comfortable distance of at least three, all of which often ran the same programme simultaneously.

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[1] *The Story of Melbourne* (1934), pp. 118, 120.

[2] By comparison, according to *Variety* (U.S.A.), the world average was one theatre seat to every 44 people. Other figures: U.S.A., 1 to 10; U.K., 1 to 12; Canada, 1 to 13; Italy, 1 to 13; France, 1 to 17; European average, 1 to 21; South American average, 1 to 29.

The cinema and dance-hall, this century's twin menaces to the family circle, were sometimes tamed and brought within the home. In 1924, when they were still something of novelties, promotion of the home cinema and of the home jazz dance to a gramophone was at its height. The Pathé home cinema outfit ("be your own star in the evening at home") and the Salonala ("the only really non-scratch tonaphone for jazz parties") were then priced within reach of the average middle-income family. But the tendency was for manufacturers to keep improving such toys in the interests of a mechanical perfection which was not necessarily required. By the 1950's few families could afford the elaborate home cinema equipment offered. Although some radio-gramophones were within economic reach, the demand had dropped. Only people who seriously wanted to listen to music bought them. The family circle had somehow grown flatter in the intervening quarter-century. It could not now contemplate an evening in the lounge with no greater entertainment than a gramophone record, interrupted by vigorous winding, or a pianola roll, terminated by the scream of rewinding.

The gramophone, the pianola and home cinema, like all early mechanized home entertainments, were still essentially community pleasures in the nature of party games. The later twentieth century substituted the radio, a private enjoyment for deserted parents.

The night-club with dim, concealed neon tubing and packed tables, was limited by liquor restrictions. Several in Sydney and a few in other cities attracted some devotees, but showed no signs of becoming a national habit.

For the average Australian twentieth-century working man, leisure began each day at about five when work was through, and ended in most cases an hour later when the bars closed. There was a final wild splatter of beer, a few moments of reeling banter on the pavement, and then a long walk home while the internal glow gradually annealled the day's work into a solid load of depression.

After "tea", the evening meal taken about 6.30, he sat with the evening paper or escaped, once a week or so, to a sports club or lodge. On odd occasions he and his wife participated together in some form of evening entertainment. As well as an occasional picture night, there were social clubs, euchre and dance nights, church affairs. More rarely there were parties in private homes, when the men gathered in one corner, standing, talking about cars and horses, and the women sat in a ring around a table of tea-cups and cakes, talking about people and children.

Sex segregation started in the state schools, which were generally careful to stop co-education before puberty. Segregation contrasted strangely with the early advances in the political and social status of women,[3] but possibly it was partly due to these advances. For the Australian woman, granted the vote around the turn of the century, knew nothing of suffragism. Lacking the experience and the will of those battles, she seldom appeared to query the inferiority of her position in a man's world. She accepted the ban from the hotel bar and some states' jury boxes and subscribed to her husband's belief that her place was in the kitchen. In pursuance of this belief, those husbands who were not so rugged as to consider that any attention to the home plan was effeminate, insisted that the kitchen should receive prime place in any house.

Conscious of his profoundly superior mechanical knowledge, many an Australian man hesitated to let his wife drive the car or wind the clocks and was almost resentful of fool-proof enclosed mechanisms from America. He would always prefer a complex system of levers, challenging his dexterity and mechanical intuition, to a press-button. When

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[3] **VILLAIN**: Promise me to be mine, or defy me — to do my utmost!
EMMA: I defy you, coward. Remember, you have no timid English girl to deal with, but an independent, fearless Australian, who scorns your threat!
— From a play by L. Benbow, Castlemaine (Vic.), 1874.

Australians made domestic equipment they usually managed to include twice the number of controls as on a similar American machine.

Women appeared to distrust the press-button for a different reason. They were the last craftsmen in Australia. Given an automatic laundry machine by their husbands, they were still inclined to wash the important pieces by hand in cement troughs. Even in 1950 many insisted on a fire-stove set in a brick recess in addition to the gas or electric range. This was only partly due to power shortages. External aids to the housewife were regarded with distrust. Canned foods were never seriously considered. Commercial laundries tore the clothes, broke the buttons and took insufficient care with shirt collars. Pressure cookers, vacuum pans and other new cooking devices which were introduced after World War II were suspect. "Pressure cooking is just the lazy way", said a housewife in a 1949 radio interview, commenting on the "decline in cooking standards" with advanced equipment.

The elements of the house which justified the attention of a man were the eaves gutters, sliding sashes and any other parts which were liable to leak or jam. The plan, the colours, the fabrics, the shapes — these were in woman's domain, and most men were content to leave the selection to their wives. And contrary to the Australian man's herd instinct, which tended to perpetuate the average, the Australian woman's domestic instincts kept her jealous. Immediately her husband mentioned building she thought of other homes and wondered how she could improve on them, and "go one better". Ultimately she was in competition with every other woman who was planning or had recently built a home.

The Australian house was of feminine gender, contrary to the European tradition of a neuter building. Once a month, or at some longer but regular interval, the feminine house blossomed. At this time the housewife would become hostess to a small, select group of other wives in her street, each of whom would inevitably enjoy a turn as hostess in one of the following weeks. The lounge room would have been dusted and polished especially carefully during the morning, and the pink gladioli, held for this occasion, would be arranged neatly with a spray of young gum tips on the corner table. Cakes, perfectly constructed with engineering precision in the shapes of frogs and mushrooms, would be consumed with tea against a light and incidental background of conversation.

The fact that most men, in all classes of society, were content to remain an indulgent observer at conversations with the builder or architect led some architects to single out women for most of the blame for bad planning and poor decoration. One whose beliefs on this theme were so bitter that they seldom left his conversation for long was Harold Desbrowe Annear. He condemned builders who unquestioningly obeyed "feminine conventions". Unfortunate experiences with the wives of his wealthy clients prompted him to say: "A male attains to manhood when he discovers that his job is bigger than he is. A woman arrives as soon as she can exercise dignity and hatred . . . and social advantage." "Is she the right sort of creature to order architecture?", he asked, demanding that men take over the responsibility of home-building. But seventeen years after his death women were still doing the talking at architectural interviews, and not always to the detriment of the plan.

•

From 1910, small self-contained flats in large multi-storey blocks appeared occasionally near the hearts of the bigger cities, but the idea never flourished until the late depression years in Sydney. Then low building costs attracted investors by the score to the steep old streets round King's Cross and Elizabeth Bay on the harbour edge close to the east of the city. Young people eagerly welcomed the escape from suburbia, the low rents, the shortlived glamour of elevated living, the compact economy of furniture and the harbour views which lasted until the neighbouring block reared up. Lax building codes allowed full site coverage. The density of population rose to 200 people per acre, Australia's highest. The walls rose, red and sheer, ten and twelve floors above the twisting streets. They pressed together, neighbour overlooking neighbour's bathroom.

After 1934 the flat fashion spread to the eastern suburbs and to the north shore. Height limits imposed by municipal councils limited blocks to three or four floors in most districts — squat blocks of liver-coloured bricks and corner windows lining the treeless streets.

The practice passed slowly to Melbourne and between 1936 and 1940 a great number of blocks were built. They were smaller than in Sydney. Nearly all Melbourne suburbs limited the height to three floors and most blocks were content with only two floors. They were scattered through the residential districts of the inner suburbs, never collected in rows as in Sydney. There were only faint echoes of the movement in other capital cities.

The bachelor flat, of one or two rooms packed with labour-saving devices, made its first appearance in "Cairo" in Fitzroy, Victoria (1935), a Functionalist courtyard block designed by Best Overend, just returned from three years' experience with Wells Coates, the English exponent of the minimum flat.

War-time restrictions stopped the chain of flat-building. By 1950 it had only recovered to the extent of sitting up to some three floors. But there were many appearances of a general recovery. Two of Melbourne's most spectacular blocks, "Stanhill" in Queen's Road, and "Hillstan" on the Nepean Highway, both by Frederick Romberg, were completed during this year.

The 1947 census indicated that between the depression and the war the ratio of flat and tenement dwellers to families in private houses changed from one to nineteen to one to twelve. Sydney, with 56,820 flats, still contained more than all the rest of Australia.

While aesthetes were deploring the ugly eruptions on Sydney's east side, sections of the community were bitterly opposed to the principle of flat-building for its implied assault on the family circle. It was sometimes claimed that church influence in the municipal council chamber was responsible for the bans which operated in many towns. During World War II, town planners and some sociologists aligned themselves with the investors of depression money. The planners argued that no interference with the family hearth was intended. Multi-storey accommodation was necessary to bring the spreading single-storey cities back to workable horizontal dimensions, but parents with children would not be asked to live in the big blocks. These would be reserved for elderly people and for childless couples. The opposition objected hotly that most childless couples were indirectly the outcome of flats; the minute bedrooms and the absence of gardens made the very thought of children uncomfortable. But despite this apparent inducement to Sydney's young couples to restrict their families, the city maintained through its flat-building era a higher birthrate than Melbourne or even Adelaide, "city of the churches".

Between 1932 and 1939 Sydney's birthrate of 17·51 per 1,000 mean population was exactly the average for the whole of Australia. And despite the unsavoury reputation of crowded King's Cross and the general belief in other states that Sydney was Australia's den of cosmopolitan loose-living, the city had a lower percentage of ex-nuptial births than had Melbourne, Hobart or Brisbane.

For a nation which scorned the amenities of communal dwellings and clung to the principle of the private cottage, presumably as a family home, Australia's birthrate was always surprisingly low. It dropped, jerkily, some 50 per cent in the century beginning 1850. It rose at the beginning of the wars and booms and dropped during economic slumps[4], but the number and size of houses available to young couples had no apparent direct effect upon it. In 1946, at the peak of the post-war housing shortage, when the houses that were built had fewer and smaller rooms than ever before, the birthrate was higher than it was before the depression.

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[4] Between 1861-65, the birthrate was 42·44 (per 1,000 mean population). It dropped to 35·17 in 1885, flattened out during the boom, dropped suddenly before 1900, rose to 27·78 in 1914, dropped to 21 before the depression, to 17 in the depression, and then rose sluggishly to 23·62 in 1946 (census figures).

Australian parents never would have tolerated the idea of their son and daughter sleeping in the same room after babyhood. In 1946 the Commonwealth Housing Commission suggested the age of eight years as the maximum before sex segregation in the home should start, but most parents saw to it that separate rooms were provided before this. The Commonwealth's housing standards, prepared for the guidance of state authorities after World War II, suggested that the family of five or six members should have a house no smaller than 1,100 sq. ft. with three bedrooms. This put the parents into a room 135 to 150 sq. ft. in area, the two sons and the two daughters each in double rooms of 110 or 120 sq. ft. Parents who could not manage such an even balance of children were advised to put the three of one sex in the main bedroom and to take one of the smaller rooms for themselves. These standards were generally accepted by the various state housing commissions and building regulation committees, and were gradually adopted by private small-home builders. But few parents relished the idea of taking one of the smaller bedrooms. The "Master Bedroom", as the plans described it, remained an important feature of the house, irrespective of accommodation difficulties further up the passage. The main bedroom shared the street frontage with the "Lounge". It was here that visitors laid their hats and coats on the pink satin bedspread.

In the average privately-built small post-war house, bedrooms occupied about 33 per cent of the total space – more than living, cooking and eating rooms combined. Washing and toilet space, halls, walls and storage took the largest share – about 40 per cent of the house.

20

Prospects

AFTER World War II, White Australia, never noted for the warmth of its welcome to foreigners, was committed to an immigration policy which would dilute its British stock with some 20 per cent of central European blood by the end of the decade. The newcomers were as unused to the principle of a private villa for everyone as the Australians were to the strange languages and the smell of garlic. Perhaps over-anxious to adopt the look of their new country, some ex-Europeans were inclined to favour the houses with the most aggressively Australian characteristics: the hardest purple brick walls, the heaviest red tiled roofs, the most corner windows and the flashiest plaster moulds.

But out in the back-blocks of suburbia, past the tram terminus and the last little shop, beyond the reach of the pipes and wires of civilization, other new Australians had doubts as they searched for a place to make a home. They remembered the best aspects of the apartment blocks of their home towns: a high room, a view of a park, the purr of the city beyond the trees luring them to the gay life only a minute away. Out at the end of the Australian suburb, where raw new houses stood in shadeless yellow grass beside the rutted tracks, one seemed to suffer all the disadvantages of city life and enjoy none of the advantages.

Australia did not take kindly to criticism on these lines. She sauntered into the second half of the twentieth century without the least intention of altering the shape of her home and determined to resist the growing influences to change. Most people who knew her well would never belittle her capacity for resistance. Many who loved her best were profoundly concerned by this. The youngest continent, so undeveloped, yet so set in its ways; what of the promise of the eighties, when Australia was "on the threshold of her glorious career", the free new world, America's rival paradise? Australia of course had developed since then, but certainly no faster than the rest of the world. She had floated in the current.

What has happened to the spirit, the gusto, the faith? The twentieth century seems to have tamed and deadened and cheapened the Australian character. The frustrated old man's lament – an old head on young shoulders – has come to unnatural life. The Wild Colonial Boy is selling used cars.

But the potential is still as high. In the distraught middle of the twentieth century Australia is still one of the most generous countries in the world to its people, its handful of anxious whites in the awakening East. It is still on the threshold, if a little stiff with waiting for the drive that will force open the door. Someday, doubtless before the century grows too old, some circumstance, internal or external, will renew the stimulus. The vision will return. The door will be open. Australia will advance again.

In the new climate beyond the door, a house which better expresses the life and the land may grow more profusely and the scattered seeds spread by creative architects may take abundant root.

Glossary

Architrave: trim (usually timber and decorative) around door or window.

Bresummer: verandah beam, especially when carrying a second storey.

Cantilever: a projection unsupported on its outer edge.

Caryatid: a column in the form of a woman.

Cornice (interior): band covering the joint of wall and ceiling.

Hipped (roof): a roof pitched from every wall, contrary to a gable.

Joists: small parallel floor or roof beams.

Nogging: horizontal timber stiffening and fixing pieces between studs.

Pediment: triangular decoration to a gable-end or above an opening.

Pilaster: rectangular half-column projecting from a wall.

Sarking: waterproof (usually paper) sheet under roof covering.

Skillion: lean-to addition, or any monopitch roof.

Skirting: band on wall at floor.

Studs: upright members of a timber frame.

Vermiculated (stonework): picked to give a worm-eaten appearance.

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